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A MONTHLY RECORD OF

MEDICINE AND THE COLLATERAL SCIENCES.

Vol. V.] APRIL, 1867. [No. I.

Original Communications.

ART. I.—*Median Lithotomy.*—By THOMAS M. MARKOE, M.D., Surgeon to the New York Hospital, Adjunct Professor of Surgery in the College of Physicians and Surgeons, &c.

THE recognized dangers of lithotomy have, from the earliest times, led surgeons to seek, by various modifications of the operative procedure, to obviate these dangers, and to diminish the fatality of the operation itself. One of these modifications, which early suggested itself, was to avoid altogether any incision of the bladder, and entering the urethra alone with the knife, to prepare a passage for the exit of the stone, by dilating the parts between the external incision and the cavity of the bladder. The old Marian operation was founded upon this idea. It consisted of an incision in the perineum, not always in the median line, which en-

tered the bulbous portion of the urethra, which, with the superficial perineal tissues, was freely incised. Into the urethra, thus opened, were introduced various instruments for stretching the passage into the bladder, and through the passage thus dilated the forceps were introduced and the stone extracted. This operation, which was but rudely executed, embraced a principle which has never been lost sight of; and many attempts have been made to revive it. In the year 1819, Sir Astley Cooper suggested and performed a similar operation, opening the urethra in the perineum, and dilating the passage by the use of Dr. Arnott's dilators, Dr. Arnott himself superintending this part of the manipulations. Manzoni, a surgeon of Verona, about the year 1808, published an account of his method of operating, which consisted of an incision in the median line of the perineum, opening into the spongy portion of the urethra, and dilating the bulbous and membranous as well as the prostatic portions of the canal. De Borsa, also of Verona, made a very important advance on this suggestion, when, in 1843, he recommended opening the urethra at its membranous portion, and dilating only the prostatic portion, which he contended was the most dilatable part of the canal. De Borsa made two incisions: first, an external tegumentary cut; and second, an internal urethral incision, through which he introduced his finger, gradually forcing his way into the bladder. Acting on the suggestions thus presented, Mr. George Allarton, of South Molton, England, contrived an operation, an account of which he published, in 1855, in a little pamphlet which he called *Lithotomy*

Simplified. Allarton's operation consists of an incision made by a sharp-pointed, narrow knife plunged into the perineum, so as to reach and open the membranous portion of the urethra, and which, on withdrawal, makes the necessary incisions of the perineal tissues. Into this incision a probe is passed down to the staff and into the bladder, as a guide upon which the finger can be introduced through the prostatic urethra into the bladder, thus dilating the passage so as to permit the introduction of the forceps, and, if the stone be of moderate size, the extraction of the stone.

This operation, called, in England, "the Median" or "Allarton's operation," has now been before the English public for about ten years, and has attracted a great deal of attention, both in London and the Provinces. Most of the prominent English surgeons have given their opinion of the operation, and, what is more to the purpose, most of them have tried it. In a book published in 1863, entitled *Median Lithotomy*, Mr. Allarton gives a full history of his operation, and a very complete statement of all the views of the different English surgeons who have published anything on the subject. He gives, also, details of most of the cases in which his operation has been performed, and finally tabulates 170 cases, embracing all of which he could get any account, by himself and by various other operators, of all ages from 1½ to 77 years; and from these he claims a mortality of about one in twelve. In speaking of this table, Mr. Allarton says: "The following list of operations comprises 170 cases, reported by 50 surgeons (hospital and private). They consist

of 153 particularized cases, and 17 not particularized. The ages vary from 1½ to 77 years. The average mortality is 1 in 12, as compared with lateral lithotomy, which is 1 in 5 or 6; a saving of life equal to one half. The mortality from 1½ to 38 years is only 1 in 38 cases. The mortality under 20 years is 1 in 27. Above 20 years, the mortality is 1 in 7 cases, which is far better than the total average of lateral lithotomy at all ages."

My attention was directed to this operation by some of the earliest reports of the English cases, and by some remarks of Mr. Erichsen, and some other writers, not decidedly favorable to it, which appeared in a rather controversial form in the journals. I have been favorably impressed with the operation, and, from a trial of it in twelve cases, I am free to profess myself its warm advocate.

The principle upon which the operation is founded, is to avoid any incision of the bladder or its neck, and, by a dilatation of the prostatic portion, to obtain the necessary access to the bladder through an incision in the membranous portion of the urethra. It is urged, and with some justice, that it is not possible or safe to dilate the prostate sufficiently for the extraction of the largest stones; and this is one of the principal objections advanced against the operation. Two answers may be made to this objection, each of them complete, as I think, in itself. *First.* If more space be positively required, any necessary incision may be made in the prostate, as a secondary step in the operation, by which all the room can be obtained which any other mode of operation can give; and *Second.* Through the direct open-

ing made from the perineum to the bladder, instruments can be introduced into the bladder, with ease and safety, of sufficient size and power to break up the largest stone, and thus remove it, without the infliction of any laceration on the neck of the bladder. On this last suggestion, Mr. Allarton dwells most emphatically. He insists that it is a matter of absolutely no importance that the stone be removed entire, and that it is not only good mechanical philosophy, but good surgery, to break into fragments any stone whose removal entire would endanger the integrity of the important parts through which it would have to be violently withdrawn. He says: "There is no rational excuse for perpetuating lateral lithotomy, when nearly every calculus can be extracted through the median aperture, and those which cannot can readily be crushed." "Surgeons have imbibed the habit of looking upon a urinary calculus as a thing to be held sacred, or, if ever to be crushed, only through a natural passage and by an orthodox lithotrite. They do not hesitate, when they can, to disintegrate this precious gem by solvents, nor do they object to disintegrate it more roughly by means of a lithotrite; yet, strange to say, when the knife is to be used, then, and not till then, does the stone assume a sacred character, and room must be made for it to come forth whole and uninjured."

The steps of the operation are as follows: The patient being secured in the proper lithotomy position, and the grooved staff passed into the bladder, the surgeon introduces the forefinger of the left hand into the rectum, with the palm upward, and ascertains, as accu-

rately as possible, the point at which the membranous portion of the urethra emerges from the prostate. Keeping the forefinger carefully on this point, a long narrow, sharp-pointed knife is entered on the median line of the perineum, about three quarters of an inch in front of the anus, with its cutting edge looking upward, and pushed steadily forward, guided by the finger, in the rectum, in such a direction that the point of the knife shall reach the groove of the staff just at the junction of the prostatic and membranous portions of the urethra. The operator now making sure that the point of the knife has entered the urethra, draws the knife forward and upward so as to incise the membranous portion of the urethra through nearly its whole extent, and then withdrawing the knife, with its cutting edge still upward, completes the incision of the soft parts to the extent deemed requisite. Along the wound thus made a probe is introduced into the opening of the urethra, and thus on into the bladder, to serve as a guide for the finger. The staff is now removed, and the finger, guided by the probe, is slowly and carefully introduced into the opened urethra, and through the prostatic portion, which yields with surprising readiness to the advancing finger, allowing it, almost without resistance, in most cases, to enter the bladder. The stone can now be felt and its size estimated ; and one of three courses is to be pursued. If the stone be of moderate size, the forceps may be introduced along the finger and the stone seized and extracted. If, however, the stone be very large, then with the finger still in the wound, a narrow bistoury may be introduced, and the prostate fur-

ther divided, as in lateral lithotomy, or in any other direction which may give the additional room required; or, lastly, what is in my judgment by far the better plan, a strong, straight pair of forceps may be introduced, by which the stone can be broken into fragments, and removed without incurring the risk of laceration, or the dangers which are inseparable from a free incision of the neck of the bladder. This finishes the operation proper; but, as a matter of course, a careful exploration should now be made, to discover the presence of any additional stones or fragments; and thorough washing out of the bladder with warm water should never be neglected.

The advantages which this operation is believed to present are:

First. The incision, being in the median line of the body, does not encounter any large vessels, and must, therefore, be less liable to hemorrhage than the lateral or bilateral operations. It is true that hemorrhage has occurred after median lithotomy, but is much less frequent and formidable than that which occurs after other operations in which the prostate is divided, and its occurrence is probably to be explained by some accidental deviation of the knife to one side or the other of the median line.

Second. The incision, being in the median line, and not reaching as far back as the verumontanum, cannot injure the seminal ducts, and cannot, therefore, produce emasculation. This I acknowledge is one of the theoretical dangers of lithotomy, the importance and, indeed, the reality of which is still *sub judice;* still, the

median operation may fairly claim it as an advantage that it presents no danger in this direction.

Third. With the finger in the rectum, the course of the knife can be most precisely appreciated, and ordinary caution only is necessary to avoid wounding the gut in the first plunge of the knife. After the groove of the staff is reached, the direction of the incision is away from the gut, and, therefore, a wound of it is impossible.

Fourth. There is no danger that the incision may fail to reach the bladder. This is one of the rare accidents which may happen to the lithotomist. The knife, slipping out of the groove of the staff, may wander in the areolar interspaces around the neck of the bladder, and the proper incisions may apparently be completed, and yet the bladder has not been opened, and of course the finger, or the forceps, introduced into such a wound, fail to reach the stone. The median operation presents no such danger; as when the urethra is once opened, all that the operator has to do is to pass his finger into the bladder, guided by the staff, or, what is better, guided by a probe or director introduced through the wound.

Fifth. The deep perineal fasciæ not being invaded by the knife, deep infiltration of urine cannot occur. A very considerable percentage of the deaths after lithotomy is caused by the infiltration of urine, which finds its way into the deeper areolar interspaces, through an opening accidentally made, and perhaps too small to be recognized at the time of operation, through the deep layer of the perineal fascia which surrounds the prostate gland. No delicacy of touch can warn the most careful and skillful operator that his knife is traveling beyond

the line of safety, and hence this danger may be said to be inherent in the lateral operation So great has this danger been acknowledged to be, that several modifications of lithotomy have been devised to meet it, as the bilateral operation, and the operation with a lithotome cachè, where it is intended so to limit the extent of the incision by a mechanical contrivance, that it cannot go beyond the limit of the prostate gland. I consider it as a most important recommendation of the median operation, that this serious accident cannot occur when it is properly performed, and is scarcely liable to happen even to the most clumsy bungler.

Sixth. One of the most interesting and striking features of Median Lithotomy is seen in the behavior of the prostatic portion of the urethra after the operation. It is now generally acknowledged that one important function of the prostate gland is, by virtue of its abundant unstriped muscular fibres, to act as a sphincter of the bladder. In the lateral operation, this sphincter is divided, and, as a matter of course, the urine trickles from the bladder through the wound, there being no power of contraction left in the divided sphincter. The water is thus in constant contact with the recently cut surfaces, to which it is a powerful irritant, and, dribbling out of the wound, runs down upon the bed, saturating the sheets, wetting and excoriating the patient's back, and making his whole condition offensive to himself and others, from the constant and pervading smell of urine. Nothing but the incessant watchfulness of an experi enced nurse, and the frequent changing of what is called the "lithotomy sheet," can keep the patient even tole-

rably comfortable, or passably clean. In median lithotomy, all this is changed. The prostate, not having been divided, retains its sphincter power, and the urine does not flow from the bladder, except at the will of the patient. Provision can therefore be made to receive the urine, as it flows through the wound, either in a bed-pan, or, in the case of young children, on a folded sheet, which being removed, they are left dry and comfortable. Usually, in from two to four hours after the operation, the patient experiences a desire to pass water, which is accomplished without difficulty through the wound, and then the bladder remains quiet, until a sufficient accumulation of urine has taken place to again provoke the desire to empty the bladder. In most cases, this regular action of the bladder goes on throughout the cure, no dribbling of the urine taking place at any time. In a few instances, either in consequence of severe stretching, or perhaps laceration of the fibres of the prostate, the retentive power of the bladder is not so well preserved, and then the urine leaks more or less constantly into the bed. I am not disposed to claim for this feature of the operation any important bearing on the success of median lithotomy, but I do claim that it adds most materially to the comfort of the patient, and thus, I believe, contributes indirectly to the rapidity, and perhaps to the certainty, of a favorable termination of the case.

In performing this operation, it will readily be perceived that we are not dependent upon any condition of the bladder for its safe completion, and therefore the distention of its cavity with a certain amount of urine,

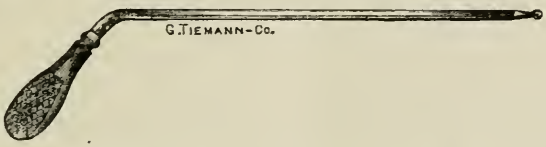
or the injection of warm water, is in no way necessary. The median section is as easily and as safely made with an empty as with a full bladder.

As far as my own experience goes, the principal difficulty, if not the only one, in the performance of the median operation, consists in making the point of the knife reach the groove of the staff with certainty and precision. Deviation to one side or the other of the median line, to a very small degree, will throw the point of the knife away from the groove, and the staff is passed by the knife, which penetrates the tissues by the side of the membranous portion of the urethra. I am satisfied that this is a positive danger, and though in the hands of any careful surgeon, such wandering of the point of the knife might never do serious mischief, yet in the hands of an inexperienced operator, I can conceive that extensive or even fatal injuries might be inflicted. This important step of the operation can only be well done by carefully bearing in view the relations of the parts, and with a cool eye and steady hand appreciating the direction in which the point of the knife is traveling, and correcting any deviation, partly by the eye and partly by the finger in the rectum, against which the back of the knife ought constantly, though slightly, to press. In order to make this step of the operation more sure and more easy, I have had my staff made with a very wide, and at the same time a very shallow, groove. The depth of the groove, which is so essential in the lateral operation, for keeping the point of the knife in its channel while the incision of the prostate is being made, is in the median operation no longer nec-

essary. All that is required in the median is that the urethra be reached by the point of the knife, and then the incision passes forward in a direction away from danger, and a shallow groove is sufficient to guide the knife. By flattening out, as it were, the groove in the ordinary staff, we obtain, without increasing the actual size of the instrument in the urethra, a larger transverse diameter, and thus make it almost impossible to fail in reaching the groove in the deepest perineum.

Another feature of Mr. Allarton's method of operating, in which I think improvement may be made, is in the mode of guiding the finger into the bladder after the urethral opening is made. Mr. Allarton recommends a long probe, which I doubt not is sufficient in most cases; but it must be remembered that the incision in the urethra is a linear one, and one which has no tendency to gape open to receive the advancing finger; rather, the finger, as it approaches the urethra, would, I think, have a tendency to close the slit in its walls. I found, in my early operations with the probe, that there was a positive difficulty here, which led me to substitute for the probe a second staff, which, being introduced into the wound with the groove upward, while the first staff was still retained *in situ*, gave me, between the two grooves, an easy and certain entrance into the urethra. To meet this point more perfectly, or at least less clumsily, Dr. J. L. Little, of this city, who has taken a great deal of interest in this operation, and has contributed several cases of its successful performance, devised a sort of slender gorget, or rather a broad, straight and short staff, with a flat, tapering groove and a probe

point, which is easily introduced into the opening of the urethra, and then being pushed on into the bladder, as the urethral staff is withdrawn, forms the best possible guide for the finger or for the forceps. The staff portion of this instrument is about six inches long, with a handle set at an angle with the blade of about forty-five degrees, so that the hand which holds it shall be out of the way of the manipulations. This simple instrument I have used in all my later operations, and it seems to me to fulfill the indications in the most satisfactory and perfect manner. It was made by Messrs. Tiemann & Co., 63 Chatham street.



Much was said, in the early history of the median operation, about dilators, and the mode of safely conducting the dilating process. This point seems, by the later writers, to be less insisted on, and, indeed, I find that many operators do not employ, in the extraction of the largest stones, any dilator except the stone itself. Indeed, Mr. W. Cadge, of Norwich, Eng., gives an account of a stone weighing four ounces, five drachms and a half, which he removed from a man of sixty-three, without any preliminary dilatation except what he could accomplish by the finger. Of course, in extracting large stones, the dilatation is produced by the stone grasped by the forceps, drawn steadily and forcibly by the operator against the neck of the bladder; and precisely here lies the difficulty and danger of extraction, in every

mode of operation. It is idle to affirm that an incision, seven-eighths of an inch long, through the left lobe of the prostate, will of itself give us any material increase of room in the extraction of a stone, which, like that of Mr. Cadge, measured three inches in its longest by two inches and one and a half inches by its shortest diameters. Any help that we gain by such an incision must be so merged in the general dilatation and laceration as to be insignificant; and the whole question seems to me to be, whether, in the violent and extreme dilatation necessary for the removal of a very large calculus, the patient's safety is in any degree secured by having a large incision made in one side of the prostate gland. I cannot help believing that instead of being an element of safety, such an incision is an element of danger; that it might determine a laceration of the fibrous covering of the prostate, and the deep perineal fascia, instead of preventing it, and this more certainly and more disastrously if the capsule of the prostate have been, at any point, touched by the edge of the knife. I am strongly of opinion that the precept of sound surgery, in this matter, should be, that no very large stone should ever be drawn through the neck of the bladder, whether the prostate be divided or not, but that every stone which by its size is likely to do mischief if forcibly dragged entire through the wound, should be reduced to fragments and removed piecemeal. To accomplish this crushing of a large stone, is ordinarily a very easy process. By means of a straight, strong pair of forceps, with long handles to increase the leverage, any ordinary stone may be easily broken. Those which are harder

may be crushed by the largest and strongest lithotrite. There may be, as a rare exception, some stone so large and so hard, that it refuses to yield to either of these instruments, and here it might be useful to have an instrument which would drill the stone in various directions, and thus prepare it to yield to the crushing force. But suppose all these plans to fail, and the recusant calculus, from its size and hardness, defies all our efforts to reduce it; the median operation leaves the parts in as good a condition for gaining space, by additional incisions, as either the lateral or bilateral methods; and if the violent evulsion must take place, it can be accomplished as well and as safely by the median, thus modified, as by any other operation. At the same time, while I do not deny the possibility of its occurrence, I think such an obstinate calculus must be so rare as practically to be left entirely out of consideration.

The following cases, being all that have presented themselves to me since my attention has been directed to the median operation, were operated on either at the New York Hospital or at the Clinique of the College of Physicians and Surgeons. In addition to my own cases, I have presented a number contributed by my friends, in most of which I have been present and assisted at the operation. Dr. Albert G. Walter, of Pittsburgh, Pa., has been for some years giving his attention to the subject of median lithotomy, and has published nine successful cases of the operation. His cases appear in Mr. Allarton's work, *Median Lithotomy*, and as they appear to represent all his experience during the period from 1847 to 1856, we may fairly include them

in our table of American cases, which would then present the simple record of thirty-one cases, of which all were successful.

Case I.—Frank Crane, October 8th, presented himself at the Clinique of the College of Physicians and Surgeons, with stone in the bladder. He had had some symptoms of the trouble for about three years, but during the last four months has suffered severely. The symptoms were well marked, but presented no unusual features. The steel sound easily detected a stone, which did not seem to be a large one. After some preparatory treatment, the operation was performed by the median section, on November 4th, 1861. A staff with a large groove being first passed along the urethra, and held by an assistant, the finger of the left hand was passed into the rectum, and the precise position of the prostate gland carefully determined. With the end of the finger resting as a guide upon the anterior, inferior surface of the prostate, a long, narrow-bladed, sharp-pointed knife was introduced about half an inch in front of the anus, with its back toward the rectum, and plunged carefully down exactly in the median line, so as to touch the staff just at the apex of the prostate gland. When the point of the knife was felt to be fairly lodged in the groove of the staff, the blade was carried upward far enough for the point to divide, as I supposed, about the space of the whole membranous portion of the urethra, and the incision was completed by withdrawing the knife, cutting upward as it came out, so as to make an external incision of an inch and a half along the median raphe of

the perineum. The staff still remaining in the urethra, a steel sound was introduced along the wound, into the opening of the urethra, and used so as to hold open the urethral incision, and thereby permit the introduction of the index finger of the right hand into the opened canal. The point of the finger thus introduced, by a steady boring motion, was, after a little time, and without any violence, pushed on into the bladder, through the yielding prostatic portion of the urethra, and upon the finger there was no difficulty in introducing the forceps and grasping the stone. Some trouble was experienced in drawing the stone out of the bladder, but this was explained by the size of the stone proving much greater than we had anticipated. The extraction was finally accomplished without accident, and the patient sent home and put to bed. Three hours afterward he got up, and passed, by a voluntary effort, several ounces of urine through the wound in the perineum, and from this time forward the urine was retained and passed at will. For the first few days, the passage of the urine over the wound gave a scalding sensation, which was very painful, and for a time also the passage seemed so irritable, that the urine flowed out the instant the desire occurred, so that it was not possible at all times to keep his bed dry, but no leaking or involuntary dribbling at any time took place, and but for the suddenness with which it was occasionally passed, no wetting of the bed would have occurred. By the liberal use of morphine, these symptoms were soon relieved. But one curious result followed: the scalding, on passing water, induced him to retain his urine as long

as he could, and as soon as the irritability of the bladder was relieved by the morphine, retention occurred, and for a day or two I feared I should be obliged to resort to the catheter. By continuing the anodyne, however, the scalding abated, and he gradually began to empty the bladder at regular and proper intervals. On November 13th, the urine was passing mainly by the urethra, a few drops only escaping by the wound. He was confined to his bed about a week, and on November 14th, he was allowed to go out, as the weather, though cold, was fine. His appetite and digestion are perfect; he sleeps well at night, not rising more than once to pass water. On the 18th, he presented himself at the College Clinique, with the wound in perineo, a mere pin-hole, and the passage of urine by the urethra perfectly free and comfortable. His cure was soon perfect.

Case II.—John Ketch, æt. 3 years, was brought to the College Clinique in May, 1862, with symptoms of stone in the bladder, with which he had been suffering about 16 months. The sound readily detected a small stone, and on the 26th of May, I performed on him the operation of median lithotomy. The steps of the operation were similar to those in the preceding case, and I experienced no difficulty in gradually forcing my little finger through the prostate. The forceps were then introduced, and a small, roundish stone, about half an inch in diameter, removed. No bad symptom followed. He was able to retain his water almost completely from the time of the operation, and passed it whenever he chose to do so. A little water escaped by the wound

for three or four days, and then all came by the urethra. He suffered from some pains about the neck of the bladder on the seventh, eighth and ninth days, but from what cause was not apparent. This soon disappeared, and his recovery was complete.

Case III.—Edwin Harper, æt. 13, Vermont, was admitted to the New York Hospital, April 11th, 1863. Eighteen months previously, he had injured his urethra by a fall into a barrel, the chine of which struck him on the perineum. A considerable laceration of the integuments of the perineum was produced, probably involving the urethra, for retention of urine occurred, and the physicians under whose charge he was placed, were unable to pass the catheter. In consequence of this, infiltration of urine took place, resulting in the sloughing of a certain extent of perineal tissues. In order to make a free opening for the urine, the bladder was tapped above the pubes, and a canula was worn, according to the patient's statement, for about four months. Several operations were attempted for the restoration of the urethral canal, with such success that a bougie was finally passed along its whole length into the bladder. The wounds in the perineum, and that over the pubes, gradually healed, except a small fistulous track, from which a few drops of urine would occasionally escape. The bougie was worn continually, and was changed once in twenty-four or forty-eight hours by the patient himself. In this way it had been worn for eight months. He was not able to get out of bed, where he had been confined for nearly a year; otherwise, though

pale and delicate-looking, his health was good. On removing the bougie and passing a good-sized steel sound, the urethra was found to present no point of contraction. The instrument passed readily into the bladder, where a stone was immediately encountered. After some little preliminary care, the median operation was performed in the usual way, on the 17th of April, and eleven calculi were extracted with great ease. None of these stones were large, but their aggregate weight was 208 grains. After the operation, there was no dribbling of urine through the wound. When he desired to make his water, it escaped freely. This was the case during all his recovery, which was rapid and satisfactory. His general health improved as soon as the local cause of irritation was removed. From the fact of the injury of the urethra, we apprehended a re-contraction, and a large bougie was therefore carefully introduced at intervals of a few days, and he was cautioned against neglecting its occasional use. No tendency to contract was observed while he remained with us, and he was discharged cured May 8th, 1863.

Case IV.—William Sutton, æt. 25, a boatman, was admitted into the New York Hospital, May 20th, 1863, with stone in the bladder. He was a delicate-looking, highly scrofulous man, with anchylosis of one hip, from old disease of the joint, abscesses connected with which were still discharging freely. The symptoms of stone had been coming on gradually during a year previous to his admission, and were well-marked. Examination with a sound readily detected the presence of a calculus.

After a few days of preparatory treatment, the median operation was performed on the 26th of May. Anticipating a large stone, the incision was begun well back to the prostate gland, and made more free than usual forward. The prostate was dilated with great ease, and the bladder entered with the finger, a large stone presenting itself. The forceps being introduced, and the stone grasped, extraction was begun, but, owing to the size of the stone, presented great difficulty. During the efforts to bring the stone through the opening, the stone gave way and broke into numerous fragments, not, however, before pretty severe distention of the prostatic opening had taken place. The fragments, weighing in all two ounces and a half, were, after some tedious manipulation, finally removed, and the bladder cleared by a stream of warm water. To the finger, the mucous lining of the bladder gave the sensation of being much roughened, indurated and thickened; and it was observed, on the first opening of the bladder, that a considerable quantity of fluid flowed out, which seemed to be urine containing pus and flocculi of fibrin. From these facts, taken in connection with his feeble general health, I entertained a very doubtful prognosis. His progress, nevertheless, though somewhat slow, was entirely satisfactory. From its great distention, and probably the laceration of some of its sphincter fibres, the prostate did not on this occasion maintain its function of keeping the orifice of the bladder closed, as had been the case in the former operations, and the urine trickled into the bed, as is usual after the lateral and other operations. In all other respects, he did perfectly

well. He gained flesh and strength, apparently, from the moment the focus of irritation in the bladder was removed, and was discharged cured in July, 1863.

Case V.—William J. McKnight, a boy 3 years and 4 months old, was brought to the College Clinique with stone in the bladder, the symptoms of which had existed for about six months. I operated upon him by the median incision, in the usual way, on the 17th August, 1863. Hemorrhage took place immediately on the withdrawal of the knife, and continued quite free after the removal of the calculus, which was very small. I think my incision had been prolonged forward unnecessarily, and my knife had wounded the bulb of the urethra, from whence the bleeding seemed to come. We tried to apply a ligature to the wounded vessel, and for this purpose enlarged the external wound, but to no purpose, as we could not reach the bleeding point. We then waited a considerable time, with the wound plugged with lint, but as the bleeding still continued, a small plug of lint, dipped in perchloride of iron, was introduced down to the bottom of the wound. This checked the hemorrhage, and enabled the patient to be taken to his home in Brooklyn. Four hours after the operation, the plug was taken away in order to allow the patient to pass his water, about half a pint of bloody urine passing through the wound. Bleeding again recurred, and the plug of lint, dipped in sulphate of iron, was again introduced. No further trouble was experienced. He was able to retain his water until he wished to pass it; and from the first a portion passed by the urethra. On the

fifth day, the whole of the urine passed by the natural route; and on the seventh day, he was able to stand up and pass it as he was accustomed to do. His final cure was perfect.

Case VI.—Henry Smith, a German, æt. 30, was admitted to the New York Hospital, about the middle of August, 1863, with some symptoms on the part of the bladder, which had followed a wound of that organ, received August 9th, 1862, at the battle of Cedar Mountain. The ball had entered in front, a little to the right of the median line, about an inch above the pubes, passing through the part of skin covered with hair. It passed nearly through the body, and was cut out behind over the left sciatic notch, through which it had probably taken its course. For a week, urine flowed out through both wounds, but, after a long course of tedious suffering, the opening gradually healed, and has since remained soundly cicatrized. Owing to some difficulty in passing water, which the patient cannot explain, the catheter was employed daily during ten months. The act of micturition continued to be painful, with great irritability of the bladder, and, in fact, all the symptoms of stone gradually developed themselves. On admission, his general condition was feeble and irritable, with great distress in the region of the bladder, urine dark colored and containing a good deal of pus. A sound immediately detected the presence of a calculus, apparently of large size. The median operation of lithotomy was performed on the 25th of August. The incision was carried well back, and made quite free,

under the conviction that the stone was of considerable size. The prostate was easily dilated, and the forceps readily seized the stone, but, unfortunately, in attempting to extract it, it broke, and the numerous fragments required frequent introduction of the instrument for their complete removal. By care and patience, however, the bladder was entirely cleared, and well washed out by a stream of warm water. The hemorrhage was quite insignificant.

August 26th. Has been very comfortable, and has had some good sleep. His urine did not flow for about three hours after the operation ; and then, by a voluntary effort, he passed several ounces through the wound. Since then it has dribbled away most of the time, though he has partial control of it.

August 28th. Can hold his water four hours without inconvenience. There is now no dribbling from the wound. When he wishes to pass water, a large portion of it comes through the urethra.

From this time his progress was not interrupted by a single bad symptom. The water all passed by the urethra at the end of a week. The wound healed rapidly, and he was discharged, cured, about the end of September. The stone was found to have for a nucleus a tuft of curly hair, of the pubes which had been carried into the bladder by the ball, and there left, while the ball itself passed through.

Case VII.—John Smith, æt. 3 years, presented himself at the College Clinique in August, 1863, with symptoms which seemed very distinctly to point to stone

in the bladder. Examination with the sound at first detected nothing, and it was only after long and careful searching, that an unequivocal "click" was obtained. The sensation was sufficiently clear to warrant an operation, which was accordingly performed by the median section in the usual way. Feeling certain that the stone was small, I did not thrust my finger entirely into the bladder, but merely dilated the prostate sufficiently to permit the introduction of a small pair of forceps. It was, however, exceedingly difficult to seize, or even to find the stone with the instrument; and it was only after repeated and long-continued trials that it was finally caught and extracted. It proved to be exceedingly small, not larger than a flattened pea. No unusual symptoms presented themselves after the operation, and he made a very rapid recovery. No note was made at the time of the behavior of the urine in passing out of the bladder during the cure.

Case VIII.—John Conner, æt. 3 years and 6 months, came to the College, with a stone in the bladder, of which he had shown some symptoms since the age of three months. A stone was readily detected by the sound, and the median operation was performed on the 18th of February, 1864. It was found to be unusually difficult to seize the stone with the forceps, and this was accounted for by its being found lodged very high up and on the right side of the bladder, in such a manner as to give the impression of its being encysted at that point. The forceps finally dislodged it, and fortunately seizing it by a favorable diameter, it was extracted with-

out difficulty. It proved to be an elongated stone, about one inch in length, by about half that thickness, not tapering at the extremities, but rather like a section of a cylinder with the ends slightly rounded. Each end was roughened by the deposit of whitish crystals, the middle portion being smooth. It appeared to have been caught in the mucous membrane by these two rough surfaces, and held in that position by the contraction of the surrounding muscular fibres. No bad symptoms followed the operation. He held his water for about two hours, and then passed it at will through the wound, and was able from that time to pass it at regular intervals, whenever the inclination came on. Some dribbling, however, occasionally occurred. When he presented himself, two weeks after the operation, the wound was entirely and soundly healed.

Case IX.—Thomas McMahon, æt. 4, came to the College Clinique in October, 1864, with symptoms of stone in the bladder, with which he had been suffering for about a year. I operated by the median incision, October 10th, and, without any unusual trouble, extracted a small stone. I found it difficult to procure any accurate account of his progress after the operation, except that there was no unfavorable symptom developed during the cure. His bed was reported to be dry most of the time, but occasionally wetted, as if from a voluntary effort. He was confined to bed only three or four days, and made a rapid recovery.

Case X.—James Riley, æt. 2 years and 3 months,

a Clinique case, with calculous-symptoms for about four months. In other respects, he seemed to be a healthy child. The median operation was performed December 5th, 1864, in the usual manner, except that in this instance I did not introduce my finger into the bladder, or even into the wound. In all previous operations, I had used the finger as a dilator of the prostate; but this child was so young, and his perineum so small, that I feared to do so; I therefore substituted a pair of straight, tapering dressing-forceps, which could be easily introduced into the bladder. By then opening the handles, I had a safe and efficient dilator, by the use of which I had no difficulty in seizing and extracting the stone, which was quite small. Two hours after the operation, he passed water voluntarily through the wound. Four hours afterward, he again passed it through the wound. Four hours after this, he passed it again, some little coming through the urethra. From this time all the water passed by the urethra. His recovery was not interrupted by any accident, and he was running about the room three or four days after the operation.

Case XI.—Patrick Cahill, from Brooklyn, æt. 2 years, was operated on at the College Clinique, for stone, in the usual manner, by the median section. The calculus, when seized by the forceps, proved to be of unusual size, and it was a serious question whether it could be extracted without further incision of the prostate. By careful and steady force, the extraction was accomplished without violence, and, as far as we could judge, with-

out injury. The stone was oval in shape, tolerably smooth, and weighed four drachms, which, for so young a child, was the largest stone I have removed entire by the median section. I was somewhat surprised to find that even after so great a distention, and probably laceration of the neck of the bladder, he retained his urine 2½ hours after the operation, and then passed it voluntarily. Five hours after, he again passed water by a voluntary effort, and this time it came partly by the cut, and partly by the urethra. After this, however, it all came by the cut for a day or two, still being under his control. The wound healed well, and he made a good recovery.

Case XII.—Thomas Nagle, æt. 2 years and 4 months, was operated on by the median section, at the College Clinique, June 12th, 1865. A small calculus was removed without any difficulty. Three hours after the operation, no water had come from him. He then, by a voluntary effort, passed his water through the wound. From that time, there was no dribbling of urine, he having perfect control of the sphincter, and passing his water at will, at various intervals. Recovery rapid.

Case XIII.—Patrick O'Brien, æt. 2 years and 1 month, had suffered, almost from his birth, with some irritation about his bladder, with pain and difficulty in passing his water. The urine has always been rather scanty, and is passed with more ease when the patient is on his back. About a year ago, he was examined by a

surgeon, who detected a stone. The median operation for lithotomy was performed by my clinical assistant, Dr. J. T. Kennedy, on May 25th, 1865. For a week after the operation, the water passed mostly through the urethra, but from that time came mainly through the wound, until the healing process advanced so far as to close the channel. Nothing is distinctly stated about the control of the sphincter. His recovery was complete and perfect.

Case XIV.—Michael Docherty, æt. 4½ years, was seen by Dr. J. T. Kennedy at the New York Dispensary, July 14th, 1865. The child had been suffering from symptoms of stone in the bladder for about two years. During this time he has passed his urine only by drops, and always with pain, which continues to increase. He is much reduced in flesh, and has a pale and anxious countenance. He lives in a dark, damp room, and is evidently poorly nourished. Dr. Kennedy performed the median section, and not finding the stone readily with the forceps, succeeded, by putting the finger into the rectum, in hooking behind the stone and pushing it through the wound. It was merely a nucleus, and weighed but ten grains. About a week after the operation, for a day or two only, the urine passed without his knowledge, but subsequently he had entire control of the sphincter. He made a good recovery.

Case XV.—James Sloane, æt. 6 years, an irritable and strumous boy, had presented symptoms of stone in the bladder for about two years, when he came under the

professional care of my friend, Dr. W. C. Livingston, who performed the operation of median lithotomy for his relief, March 12th, 1862. The steps of the operation were precisely the same as those detailed in the previous cases, and a large stone was seized and with much difficulty extracted. Dr. Livingston says, in his note to me, "On the second day after the operation, he was out of bed and playing about the room. The water passed through the urethra freely on the fourth day, and on the eighth the wound was quite healed. He rapidly recovered his health, and was at the end of six months about twenty pounds heavier than at the time of operation."

Case XVI.—George Shafford, æt. 26. This most interesting case I saw in consultation with Dr. Livingston, and assisted him in the operation. He had been wounded at the battle of the Wilderness, May 6th, 1864. A ball had passed through his pelvis, wounding the bladder. After dreadful hardships and much suffering, the wounds finally closed by the 1st of September. He reached his home, in New York, in January, 1865. He had then been suffering for some months with vesical irritation, which continued to grow worse and more annoying until August 6th, when Dr. Livingston first saw him. He then presented all the symptoms of stone in the bladder, which the sound readily detected. The anterior wound, which had for months been healed, now again opened and discharged urine as freely as before. He was also suffering from a very large abscess of the abdominal wall above and posterior

to the wound. His general condition was extremely reduced and feeble. On August 18th, after some preliminary and restorative treatment, Dr. Livingston performed the median operation for the removal of the stone.

The substances removed from the bladder were in three pieces. Two of them were fragments of bone, only slightly incrusted with calculous matter. The third was a regular oval calculus, three inches in its smallest and four and a half inches in its largest circumference. The finger, passed into the old bullet-wound, which was still open, went well down by the side of the bladder, though the precise point of entrance of the ball into the bladder could not be felt. The track of the wound, as it thus passed to the bladder, skirted the brim of the pelvis, and in the sharp edge of the linea ileo pectinea a notch could be felt, from which the fragments found in the bladder had evidently been detached. The large calculus, when sawn through, was found to have, as a nucleus, a fragment of bone about three quarters of an inch by half an inch in its diameter. After the removal of its contents, the bladder was carefully syringed, and water-dressing applied to the wound. His recovery was rapid and unattended by any bad symptom. The urine passed through both wounds for a few days, but by the tenth day passed entirely by the urethra. He remained under observation until his cure was in all respects complete.

Case XVII.—Dr. J. L. Little, who has been my principal assistant in all the cases operated on at the Col-

lege Clinique, and who has, in most instances, conducted the after treatment, sends me the following cases of his own: "Blank Hales, aet. 3 years, living at Harlem, suffered from symptoms of stone in the bladder for about a year. August 4th, 1863, Dr. Little removed two small calculi by the median operation. Result: patient passed his urine, at intervals after the operation, partly through the wound and partly through the urethra. No dribbling through the wound. Recovery complete."

Case XVIII.—"David Jack, æt. 4½. Has suffered from symptoms of hip disease for about a year. No symptom of stone until about six weeks ago, when the usual symptoms, in their severe form, appeared. November 15th, 1865, Dr. Little removed a calculus, weighing forty-five grains, by the median operation. This stone is flat and very rough on one side, while the opposite side has the appearance of having been attached to some portion of the bladder. It probably had been detached only for a short time, as the symptoms of stone were sudden in their appearance. Result: patient retained his urine for sixteen hours, and then passed a large quantity. No dribbling. It is also worthy of notice that the hip-joint disease has considerably improved since the operation." Final cure complete.

Case XIX.—A boy named Trainor, æt. 9 years, presented himself at the College Clinique, during my absence in the country, with the symptoms of stone in

the bladder, which had existed for a number of years. Dr. Little performed the median operation, July 17th, 1866, and removed a moderate-sized mulberry calculus. Passed his water voluntarily two hours after the operation. Made a good recovery, and during all its progress maintained control of the urine.

Case XX.—Thomas Clark, æt. 19 months, also a Clinique patient, had given indications of stone for about six months. Dr. Little removed, August 20th, 1866, a phosphatic calculus, weighing 55 grains, by the median section. The case did well, with perfect control of bladder from the moment of operation.

Case XXI.—George Lawrence, æt. 4 years. Has had trouble in passing his water for about one year, with all the other usual indications of stone in the bladder. December 15th, 1866: the child having been brought by his parents to Dr. Little's office, was etherized, and the stone detected by the sound. The median operation was performed, on the spot, by Dr. Little, and two calculi, one a mere nucleus, were removed. The child passed his water voluntarily by the urethra eleven hours after the operation; and from this moment, not only was there no dribbling of urine at any time, but all the water passed by the urethra, none coming by the wound.

Case XXII.—Dr. E. Bradley, Surgeon in the Demilt Dispensary, sends me the following case, in the operation on which I assisted him: "James Murphy, of

Irish parents, first began to have symptoms of stone about the middle of December last; but owing to the very poor state of his general health, and the severity of the winter, the operation was delayed about two months after Dr. Bradley first saw the child." "The child is 4½ years old, and was operated on by the median operation on the 28th of April. His system sustained very little shock from the operation, his pulse never rising over 110. He slept, the night after the operation, very quietly, for the first time in three weeks; and as early as twenty-four hours after the operation, he passed his water through the urethra its whole length, and continued to do so afterward; and as early as the fifth day, I noticed he had control of the water. He continued to improve, without a single bad symptom; and at the present time, May 11th, the little fellow is playing about, as happy as ever. There was no infiltration of urine, and, on the whole, I do not see how the result of the operation could be improved in any respect."

Case XXIII.—About two years ago, Dr. Gurdon Buck, at my suggestion, tried the median operation at St. Luke's Hospital. The patient was a young man, and the calculus was apparently of considerable size. The usual incision was made, and the bladder reached without difficulty. The contact of the finger proving the stone to be large, Dr. Buck introduced a narrow, flat bistoury, and incised the prostate a little in several directions, so as to afford more room for the exit of the stone. After some little trouble, a large stone was finally extracted. During the cure, the young man had

several smart attacks of hemorrhage from the wound, one of which was so considerable as to excite apprehension. The hemorrhage was controlled, however, and the patient recovered entirely.

ART. II.—*Clinical Remarks on some Affections of the Bladder in Women.*—By GEORGE T. ELLIOT, JR., M.D., Professor of Obstetrics and Diseases of Women and Children, in the Bellevue Hospital Medical College, and Obstetric Physician to Bellevue Hospital.

IT is probable that many diseased conditions of the bladder in women do not receive the attention which their importance demands, and that their earlier and most curable stages are too frequently overlooked. This neglect prominently acknowledges four causes:

First. The great frequency of irritations of the bladder in women, due to reflex influences and to sympathetic disturbances with physiological and pathological states of the adjacent pelvic organs.

Second. The natural reluctance of women to call attention to difficulties in micturition until they result in serious inconvenience.

Third. The comparative infrequency of vesical calculus in the female, which detracts from the semeiological value of symptoms of greater importance in the male.

Fourth. The tendency of the times to fix the attention of so many practitioners too exclusively on uterine

disorders, when relief is sought for disturbances of the bladder or of other pelvic organs.

While women enjoy a comparative immunity from some of the most frequent causes for diseases of the male bladder—as stricture of the urethra, diseases of the prostate and calculus—they yet suffer from many peculiar to their sex. Displacements of the non-gravid and of the gravid uterus may occasion every variety of disorder, from simple irritability and hyperæsthesia, to complete retention of urine and disorganization of the bladder. Many of the cases of retention from displacements of the gravid womb, in the earlier months of pregnancy, occur from sudden shock and consequent dislocation; but it is probable that many more acknowledge the aggravation of preëxisting displacements of the non-gravid organ

Loss of tone in the vagina; partial or complete destruction of the perineum; increased weight of the uterus, or abnormal pressure thereon; too great size or diminished obliquity of the pelvis; those influences, in short, which, separately or in combination, cause the bladder to sag into the pelvis, facilitate the occurrence of subsequent unmistakable displacements, or determine—perhaps gradually, perhaps suddenly—those evil effects so well recognized in the male bladder as resulting from the retention of urine, both in cases where none is voided except guttatim, and in those where no suspicion of retention is entertained until the appearance of the urine, on the introduction of the catheter, after micturition, demonstrate the fact. In many of these cases, however, women instinctively obviate these

tendencies by assuming positions which facilitate the evacuation of their bladders, or replace the cystocele well within the vagina before the attempt.

Physiological congestions at the menstrual period; the mechanical and the physiological influences of coition and of pregnancy; the mechanical and the pathological influences of those tumors peculiar to the sex, which have their habitat so generally in the pelvis, before they are forced by their development to expand within the abdominal cavity; the peculiar tendency to pelvic cellulitis, to hæmatocele and to irritable tumors of the urethra; the sluggish bowels and their fœcal accumulations; and the phenomena which attend natural and forced delivery through all the stages of gestation, are farther examples of conditions peculiar to the sex which specially influence the functions and diseases of the female bladder; and the wonder grows, not so much with the comparative frequency of the causes of disease as with the immunity from their effects so widely enjoyed, as to have led to frequent neglect of the diseases themselves.

No abdominal or pelvic tumor in women should receive attention before the practitioner has introduced a long, flexible male catheter, from six to nine in number, so fully within the bladder as to demonstrate the impossibility of failure to reach its contents. If no urine whatever drip from its orifice, there is good reason for believing either that the contents of the bladder are not reached, or that the caliber of the instrument is so diminished at some point that the flow of the urine is mechanically prevented. By changing the size of the

instrument, by bringing the woman under the influence of an anæsthetic, and by pushing up the presenting part in labor, I have often evacuated a bladder which had seemed on previous trials to be empty. It would be better for women if the ordinary silver catheter had never been invented. The frequent statement of the beginner, that he had introduced a catheter during labor, and that not a drop of urine had escaped, should at once throw doubt on the thoroughness of the manœuvre. By neglecting the bladder during labor, the practitioner may not only become responsible for the resulting atony, but for those catarrhs and inflammations, and those *post-partum* hemorrhages which depend on retention.

After labor and delivery of the placenta, the distended bladder crowds the uterus upward and backward, prevents its due contraction and subsidence toward and partially within the pelvic cavity; and hence the relaxed and dislocated organ may flood the vagina and the bed, may escape the manipulation of the accoucheur, and may remain a source of danger until the evacuation of the bladder removes an obstacle to contraction. Those who are properly educated in the only safe method of following down the contracting uterus with the hand, will recognize the distention of the bladder before they leave their patient; but in the hemorrhages, which may occur some hours afterward, the state of the bladder must always receive prompt attention.

There are no conditions more liable to mislead a practitioner, alive to the risks of retention of the urine wholly or partially within the bladder, than those associated with malingering or hysteria in women.

Hysterical patients may be as incapacitated for evacuating their bladders as the paraplegic; but these are the exceptions, and in most cases the desire for the catheter grows with its use. It is occasionally very difficult to draw the line between the two conditions, and the hospital patient will occasionally retain her urine for a period of time suggestive of a doubt as to the diagnosis. Once in a while, such cases have come under my observation. One recurs very clearly to me, in which, after a careful diagnosis, I directed that the catheter should not be used again; and it was disagreeable to maintain the resolution in the presence of the subdued and piteous expression of the patient, which elicited the sympathy of the ward. But by succinctly stating, as a final judgment, that I would be responsible for the fact that "the bladder could not burst," the struggle ended in my triumph; and, to my certain knowledge, the patient experienced no ill effects.

Foreign bodies are more frequently introduced into the female than the male bladder; hair pins, and other articles found convenient for the refinements of masturbation, or for developing conditions demanding treatment, are not rarely proven to be the sources of vesical disorders and calculus in women.

Prof. Van Buren possesses a calculus the size of a hickory-nut, sent to him by Dr. Taylor, of Memphis, which had been formed around a portion of the althea root, used among the lower classes in the South for what is called "dipping." The stem is *in situ*, perforating the calculus.

Catarrh of the bladder and of the vagina often intro-

duce errors in the diagnosis of conditions of the bladder in women. They may cause the admixture of albumen and of blood, and a very mistaken prognosis. Of this fact I have known many examples, and vesical catarrh is not infrequent in the pregnant women of Bellevue. It sometimes happens that these attacks are very severe, both in the puerperal and non-puerperal states, and the cystitis may demand local treatment by injections of a mucilaginous, sedative or alterative character.

One very young woman entered my wards some years ago, for gonorrhœa and cystitis, whom I believed to be in the early months of pregnancy. The gonorrhœa and the cystitis yielded to treatment, and the pregnancy advanced to term, notwithstanding the amusing pertinacity of her denials as to its existence.

It is fortunate that we can assign cystitis in women to so many causes, as we can thus allay or prevent suspicion in families. Two of the severest attacks of cystitis in women that I have seen end in recovery were in married women whose husbands came under my care for gonorrhœa, with full confession of their fault. In another interesting case of gonorrhœa and cystitis occurring in my wards, the progressively inflamed and enlarged ovary could be readily distinguished through the vagina. Recovery followed, with no evidences of serious trouble, and the interest of the diagnosis relates only to the cause of the disease.

In 1851, I was a private pupil of Cullerier's interne in the Hôpital de L'Ourcine, in Paris, where the test for gonorrhœa chiefly relied on was the existence of a urethral discharge, capable of being pressed out by the

examining finger—a test which would be very unjust to many women.

Inflammations and extravasations into the tissues of the pelvis of women lead more frequently to the evacuation of the products of inflammation through the bladder than in men; and the suggestion has been entertained of puncturing tumors with fluid contents through the vesical walls; while the uterine cervix has been purposely, and not infrequently, sewed into the bladder in Sim's operation for vesico-vaginal fistula. The same operator has led the way in removing calculus from the female bladder through the vagina, and in relieving the intolerable sufferings in some cases of chronic cystitis in women—so vividly described by West—by incising the vesico-vaginal wall and creating a fistula. Dr. Emmet's experience with the operation has led to the singular observation that some women are averse from submitting to subsequent cure of the fistula, from dread of a recurrence of sufferings which they cannot forget.

Prof. J. R. Wood informs me that nothing is more marked than the immediate relief given to some of his worst cases of chronic cystitis in the male by the median incision.

Acute cystitis in the virgin is rare, and very apt to be neglected in its earlier stages. In one of my published cases, a virgin with an imperforate hymen and great distention of the vagina, from accumulated menstrual secretion, had not passed water for forty-eight hours before admission into the Hospital, though she had been seen by three physicians during that time. The blad-

der contained fifty-three ounces of bloody urine. I evacuated the menstrual fluid by incision, and the patient died on the fifteenth day afterward, having meanwhile recovered from a severe attack of peritonitis, and been able to walk around the ward. The autopsy showed, among other remarkable facts, that the vesical, mucous and muscular walls were softened and very deep in color; that the mucous membrane was absent in places, that a portion of the ileum was adherent to the fundus of the bladder, and that minute perforations in one organ corresponded with minute perforations in the other. Right kidney contracted and fatty, pelvis and ureter greatly distended and containing pus. Left kidney large and fatty; ureter and pelvis normal.

My colleague, Professor I. E. Taylor, has recently operated successfully in a similar case in the Hospital, where no vesical irritation had been present.

A very interesting case of cystitis in a virgin came into my wards last fall, and the results of the autopsy were shown to the class in attendance on my clinical lectures

Case —.—H. I. Single, unmarried, aged 23, native of New York, admitted to Bellevue Hospital September 11th, 1866. The patient is well built, and states herself to have enjoyed perfect health until six weeks before admission, when she suffered from unexplained retention of the urine for twenty-four hours. There is no suspicion of tubercular tendency. These disturbances then ceased entirely for a fortnight, when she began to suffer from lancinating and bearing-down pains in the pelvis, which have been so severe during the past fortnight

as to keep her in bed. During this time, the urine has constantly dribbled from her, and her bowels have been much confined. About three weeks ago, she noticed a tumor in the hypogastric region, which has been gradually increasing in size. When admitted, the expression of her face was haggard and of unfavorable omen. Skin cool, pulse small and frequent, tongue heavily coated with a brown fur. Vomits frequently. There was a hard, smooth tumor just above the pubes, reaching halfway to the umbilicus, broader below than above. This was somewhat tender. Vaginal examination detected a moderately retroverted uterus and a hard, bulging tumor on the anterior wall of the vagina. Three pints of bloody and very offensive urine were drawn by the catheter, when evidences of pericystitis were recognizable through the anterior wall of the vagina, especially toward the outlet. Twelve hours subsequently a pint and a half of bloody and offensive urine were withdrawn by the catheter, which contained blood corpuscles, pus corpuscles and quantities of vesical epithelium. The patient entertained a horror of the catheter, screaming in the most piteous manner from the pain of the gentlest manipulation; still the catheter was used much more frequently, and the bladder washed out with medicated injections. Warm poultices were kept on the abdomen, the skin excited by the hot-air bath, and stimulants were given. 16th. Urine less fetid and bloody, and somewhat diminished in quantity. Surface cold and blue. Scarcely any pulse at wrist. Persistent vomiting. Intellect clear. 17th. No marked change, except that she is growing obviously weaker. Beef tea and whisky

given by enemata. Urine less fetid and much diminished in quantity. She steadily continued to sink, and died at 7 A.M. of the 20th, having survived much longer than had been anticipated from the symptoms of collapse.

The autopsy was made six hours after death, in the presence of Dr. Van Buren. On opening the abdomen, some coils of small intestine and part of the omentum were found attached by adhesion to the posterior and superior portion of the bladder; slight adhesion of the walls of the Douglas cul de sac; the connective tissue between the pubes and the bladder much thickened; internal surface of the bladder very greatly congested, thickened, softened, of a dark color, and presenting in portions a gangrenous and a pultaceous appearance; ureters normal, kidneys much congested, especially in the pelvis of the left; and the results of peri-nephritis were shown in a number of small abscesses which surrounded the right kidney, the capsule of which was thickened.

The tolerance of the bladder, in cases of retention, and its capacity, excite our surprise at all ages of life, and in both sexes. Mr. Fearn found that a distended fœtal bladder which had proved an obstacle to labor could be proven to contain two quarts of fluid. Mr. R. L. Johnson was consulted by a woman, six months pregnant, from whose bladder he drew nine English pints of urine with a catheter; being obliged to apply a bandage, as in tapping for ascites, and to administer stimulants for extreme prostration. The patient did well, and carried her child to term.

I drew off one hundred and forty-four ounces of urine from the bladder of a woman in Bellevue, with retroversion of an impregnated uterus—exactly nine pints by wine measure—and replaced the uterus without the supervention of a single unfavorable symptom; and have seen another pregnant woman die from neglect of the earlier stages of retention. A marked illustration of abnormal capacity of the bladder is given in the *British and Foreign Medico-Chirurgical Review*, in a man of sixty-three, where no obstruction existed to the escape of urine. Fourteen English pints of urine were withdrawn by the catheter. The bladder was found to contain two large diverticula, and to be shaped like a miter.

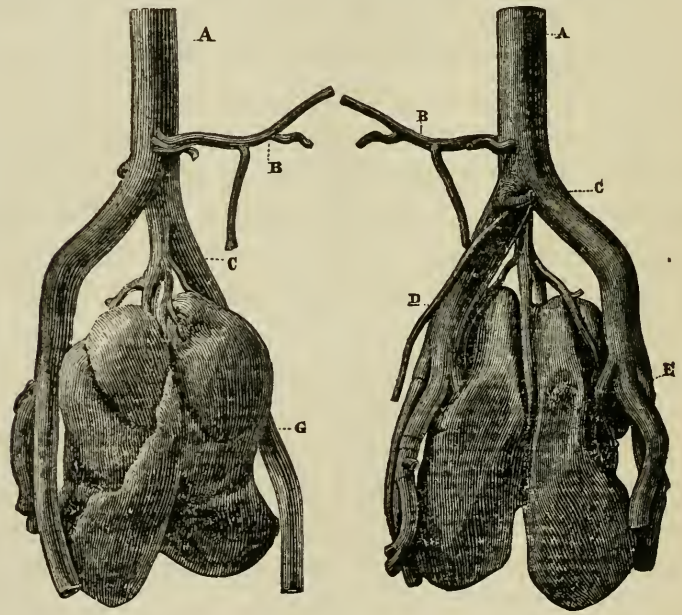
The theme is one which offers temptations in every light in which it is contemplated, but the purpose and the limits of the paper are best attained by reënforcing the suggestion that in these days of widely extended uterine investigations, the conditions of the bladder in women scarcely receive that early and constant attention which their importance and frequency deserve.

ART. III.—*Malposition of the Kidneys.*—Reported by Dr. JAMES H. BUTLER, Demonstrator of Anatomy in the University of Maryland.

ON the 14th of November last, a *body* was brought into the dissecting-room of the University of Maryland, presenting an extraordinary malposition of both kidneys.

The subject was a negro man, apparently about thirty years of age, nearly six feet in height, well formed and developed, and but little changed by sickness. The disease from which death had ensued was evidently pneumonia, both lungs being found in a hepatized condition.

When the students who were engaged on the *body* had advanced to the examination of the abdominal viscera, an abnormal position of the urinary organs was observed; for the kidneys, instead of occupying the lumbar region, were found situated in the pelvic cavity.



ANTERIOR VIEW. POSTERIOR VIEW.

A, Abdominal Aorta—B, Inferior Mesenteric—C, Common Iliac—D, Sacra Media—E, External Iliac—G, Internal Iliac.

Both kidneys were united, or fused into one, with a central line or raphé making a longitudinal fissure over

the surface of the organs, better marked on the posterior than on the anterior part. In length, they extended from the lower border of the fourth lumbar vertebra downward over the promontory of the sacrum to the middle of that bone—in all, five inches; and in breadth measured three and three-fourth inches. The ureters sprang from the pelvis, which occupied the central anterior part of the organs, and then passed off on each side, and emptied into the bladder at the usual site.

The tumor, thus formed by the kidneys, could be readily felt by examining with the finger *per rectum*.

The arteries supplying the organs were four in number—above, a single large trunk came from the aorta, just at its bifurcation, immediately in front of the *sacra media* artery, passed downward, and before entering the substance of the organs, broke up into five small branches; on the left side, two arteries came from the left internal iliac, near its commencement; on the right side, an artery passed into the organs from the right internal iliac.

Believing that such a condition as I have described has never been presented in any pathological work, I deemed it proper to lay it before the profession, with the accompanying drawings, as a remarkable circumstance, and one which doubtless gave the person no trouble, and was in no wise connected with his death.

New Journal.—It is stated that a journal is projected, to be entitled the *Journal of Cutaneous Medicine*, and which is to be edited by Mr. Erasmus Wilson and Dr. Tilbury Fox.

Reviews and Bibliographical Notices.

ART. I.—*Clinical Observations on Functional Nervous Diseases.* By C. HANDFIELD JONES, M.D., &c. (American reprint) Philadelphia: Henry C. Lea, 1867. 8vo, pp. 348.

THE increased attention which physicians of the present day, in all parts of the civilized world, seem disposed to give to diseases of the nervous system, indicates that such affections have become more common with the spread of refinement and education, that they afford a more ample field for philosophical investigation, or that both these causes are in operation. In our opinion, the latter is the case. Turn where we may, we find diseases of the brain and nerves increased in number and severity, and, at the same time, we discover that they are being studied with more profundity and care than has ever before been given to them.

But, with all our study, with all our care, with all our improved means of diagnosis and treatment, we find much about the morbid conditions of the nervous system which is perplexing, if not disheartening. When, therefore, a physician, a pathologist, and a scholar, like the author of the work before us, takes up any portion of the great subject in question, we approach the consideration of his labors with the feeling that we have a right to expect, not idle lucubrations and half-digested hypotheses, but plain facts, logical deductions, and conclusions, which we can receive and act upon with well-assured confidence. The opinion we have formed of Dr. Jones's book is, that though it contains a great deal of valuable matter, mostly the result of his own experience, and therefore doubly acceptable, it is not a treatise which really takes us much in advance of our present position. The cases are well told, the symptoms of the diseases considered are graphically described, the treatment is as philosophical and successful as the scanty knowledge at our command warrants, and for all

this we are thankful. The book is a good one. But that any physicians who have devoted themselves to the investigation of the diseases of the nervous system will treat epilepsy, or paralysis, or neuralgia, or hysteria, or any other of the affections brought before them by Dr. Jones, better after than before the perusal of his book, we do not believe. For such persons there is not much in Dr. Jones's treatise which will strike them as additions to their knowledge. To those of the profession, however, who have had neither the time nor the opportunity to study the diseases of the nervous system with the thoroughness of which they are worthy, the volume before us cannot be too highly commended. It is the best upon the subject of which we have any knowledge, and if it does not actually carry us forward, it abounds in clear statements, honestly expressed opinions and palpable facts, which cannot prove otherwise than useful to medical science. Though terming his book a treatise on *functional* nervous diseases, Dr. Jones nevertheless recognizes the fact that the adjective is, to some extent, improperly applied. He is, therefore, in accord with those physicians who doubt if any morbid affection can be merely functional. Thus, in the introduction, he says:

"I do not intend to deal with the results of manifest organic lesion, but to confine my attention chiefly to such disorders as are termed functional. It seems to me a vain dispute whether, in strict accuracy, there are or are not any such disorders. The probability is that there are not—that in all morbid action the cells and the fibres of the organs undergo some such ocular change from their perfectly normal condition. It is, however, perfectly certain that there are very grave disorders in which the most careful scrutiny fails to detect any actual change, in which complete recovery is perfectly possible, and in which the "jurantia" are such as operate more in modifying the power of the organs than their texture. To take an example: a man may have paralysis of some muscle or group of muscles which yields to the use of

strychnia or galvanism. Now, these agents can scarcely be thought to act otherwise than by exciting and increasing the vital power of the affected nerve or nervous center; or, to put it shortly, as nerve tonics, cod-liver oil, iron and phosphorus might be given without effecting the same beneficial change, at least as speedily, because they are rather analeptics than tonics. They may improve nutrition of the nervous tissue, but they do not directly drown it. Now, between such a case of functional paralysis as we have supposed and paralysis from organic lesion there is a wide interval. Strychnia and galvanism will, in all probability, make the latter worse; certainly will not cure it. Something more is needed in this case than to arouse defective nervous energy. Between the typical cases which we have taken of functional and organic disease, there intervene numerous instances of more or less mixed character. Inflammatory disease is, from one point of view, organic; from another, functional. It commences essentially as the latter; it ends as the former."

Probably the best parts of Dr. Jones's book are the chapters treating of cerebral and spinal paresis. The importance of discriminating, in cases of this nature, between what is merely the result of mental or physical exhaustion, and what may be severe organic disease, cannot be over-estimated. And yet it is very certain that many persons with paresis are hurried to their graves by mistaken diagnoses and consequent improper treatment. Dr. Jones's cases of this disorder are very valuable and striking. They are such cases as are met with every day, but which are almost sure to deceive the inexperienced practitioner. Take the following, for instance:

"M. H., æt. eleven, female. Ill two months; right side is partially paralyzed; her movements are also unsteady, as in chorea; cannot grasp anything with the right hand; leg dragged; tongue drawn to one side; functions in good order. With strychnia, iron and chloric ether, she got well in less than two months.

There can be little doubt, in this case, that the brain was the seat of the disorder, from the unilateral character of the affliction. The motor center was weak and irritable, and as it regained tone and power under the use of the roborants, recovery ensued. This clearly was a case of paresis."

It is very certain that many practitioners would treat such a case with depletive agents, and that the patient would, ere long, go to the grave.

The following outline of a case which has recently been under the care of the writer of this notice, is similar to several stated by Dr. Jones.

T. S., a boy, aged seven, has been afflicted three months with loss of memory, wakefulness and inability to concentrate the attention on even the most trifling object. Ten days before coming under treatment, became paralyzed in the right arm and leg. When first seen (January 4th), presented a decided idiotic appearance, had forgotten the names of the most familiar things, and in regard to his own name, could only remember that he was called "Tommy." The right arm and right leg were completely paralyzed. In this case, the disease had come on after an exhausting diarrhœa, and, strange to say, over-exertion of the mind at school. From these facts, and from the general enfeebled condition of the child, made worse by continued purgatives and blisters, it was determined to treat the case with stimulants and tonics. A solution of strychnia in dilute phosphoric acid, combined with the pyrophosphate of iron, was therefore administered, and a diet of beefsteak and porter enjoined. Amendment began almost immediately, and, under this treatment, combined with faradisation of the paralyzed limbs, complete recovery was effected in less than two months.

In spinal paresis, a similar condition exists to that above described, modified, of course, by the difference in the organ affected. Many cases of so-called infantile paralysis are entirely due to spinal exhaustion, and recover perfectly under the use of nervous tonics and gal-

vanism. The temporary paralysis of Kennedy is of this character. The affection must be distinguished from the *paralysie graisseuse atrophique d'enfance* of Duchenne, several cases of which were described in the number of this journal for December, 1865, and which is quite a different disorder. The paralysis following diphtheria and other diseases, exposure to currents of cold air, or to malaria, or indulgence in venereal excesses, or masturbation, is paretic, and almost invariably susceptible of cure by proper treatment.

To notice every chapter of Dr. Jones's book would require more space than we can spare for the purpose, and would then give but an imperfect idea of the good sense with which it is pervaded. We most cordially recommend it to the profession of this country as supplying, in a great measure, a deficiency which exists in the medical literature of the English language, and which will not be filled till some one with large experience and learning produces a work capable of rivaling those put forth by our continental brethren.

ART. II.—*Hysteria. Remote Causes of Disease in General. Treatment of Disease by Tonic Agency. Local or Surgical Forms of Hysteria, etc. Six Lectures Delivered to the Students of St. Bartholomew's Hospital*, 1866. By F. C. SKEY, F.R.S., late President of the Royal College of Surgeons of England, Consulting Surgeon to St. Bartholomew's Hospital, etc. etc. London: 1867. 12mo, pp. 107.

IN the last volume of this JOURNAL (*p.* 60), we had occasion to refer approvingly to, and quote from, these lectures, then appearing in a London weekly, and now collected and published "at the request and for the instruction of the Students of the Hospital in which they were delivered." They teach, to our mind, such sound general therapeutic principles, that we have great pleas-

ure in bringing them to the notice of the profession in this country. Their key-note is a strong protest against the indiscriminate spoliative treatment of disease by blood-letting, purgatives, etc., by one who has had a long and active professional life, and whose opinions are entitled to great consideration:

"The majority of our Profession are biased in favor of depletive measures. They consider diseases to originate in excess of vitality, and to be the product of undue force; I have endeavored to show that they far more commonly arise from reduced or exhausted power.

"We talk of 'increased heat,' of 'increased action,' of excitement, and so on, as demanding a reduction or lowering of the vital powers, while it is notorious that intense heat of skin is a frequent attendant on the last hours of life..... The great machine of medical knowledge, however, is moving onward in the direction of truth. On a line between the antagonistic principles of the schools of Cullen and Brown, the Profession will eventually take its stand—at a point, I suspect, nearer to Brown than to Cullen. This is the natural reäction following on years of error. The palpable confusion between diseases of the vascular and of the nervous systems which has so long prevailed, is but evidence of the same error." (*Preface, p.* v., vi.)

Though it must be admitted that the sketch is sometimes overcharged, that alcoholic stimulants are, to our notion, too lavishly extolled and used, and that the necessity of a properly adjusted and building diet is hardly enough dwelt upon, the drift of Mr. Skey's lectures is so much in the right direction, and he deals with, and battles against, theories and practice which, we believe, have done so much mischief, that, with these reservations, we can thoroughly commend his teachings, and express the hope that they will be heeded by the profession.

Four lectures are given to the subject of Hysteria, which is practically handled, and, though nothing new is told, its nomad and puzzling seemings, with the fre-

quent embarrassments in and errors of diagnosis are strikingly and instructively put, particularly as regards hysteric affections of joints, hysteric affections of the spine, and hysteric contraction of the fingers. To the well-known declaration of the late Sir B. Brodie, that "among the higher classes of society, at least four fifths of the female patients, who are commonly supposed to labor under the disease of the joints, labor under hysteria, and nothing else," Mr. Skey adds, and, according to our experience, correctly: "I would venture to enlarge this statement as regards the 'upper classes' by including a large proportion of the lower, for much of my own experience of hysteria has been obtained from the wards of St. Bartholomew's Hospital; and in reference to spinal affections in young persons, I unhesitatingly assert that real disease is not found in a greater proportion than one case in twenty, and even this is a liberal allotment." (*p.* 46.) How many an hysteric joint, after a fair amount of cupping or leeching, of blistering, of issues and rest, finally passes into the hands of the arthro-tinkers, who adjust a suitable apparatus, and the patient gets well because she gets rid of physic, and gets exercise and fresh air.

"It is not," writes our author, "a question of diagnosis between two diseases, more or less resembling each other. It is a question of disease or no disease, of reality or imitation, of true or false—of whether your purgatives, your bleedings, sweatings, irritants and counter-irritants, and your whole battery of antiphlogistics, shall be launched against a true disease in the flesh, or its ghost—whether you are to contend with a reality or a shadow." (*p.* 37.)

This form of malady, which Sir Benjamin truly said, in one shape or other, is met with at every turn in practice, is still too often overlooked by the physician; and "this truly remarkable fact," Mr. Skey thinks, "owes its existence to the predominating influence which the heart and the arterial system exercise over the judgment of the profession at the expense of a system yet higher

in the scale of organization, more sensitive, and far more liable to morbid impressions—viz., the cerebro-spinal nervous system." (*p.* 38.)

We might go on multiplying quotations until we had transferred a large part of these lectures to our pages; but we must be content with cordially recommending them to our readers, who will find them of substantial value.

ART. III.—*Guide for Using Medical Batteries* (*Being a Compendium from his larger work on Medical Electricity and Nervous Diseases*), *showing the most approved Apparatus, Methods and Rules for the Medical Employment of Electricity in Nervous Diseases.* By ALFRED C. GARRATT, M.D., &c. Philadelphia: Lindsay & Blakiston, 1867. pp. 180.

IN a recent number of this JOURNAL, the "larger work," to which reference is made in the above title, was reviewed at some length, and we then endeavored to show how lamentably it fell short of what a book on medical electricity should be. The present volume need not detain us long, as, with the exception of the thirty-seven lines beginning the first chapter, and forty-five lines and one wood-cut on pages 29 and 30 substituted for seventeen lines and two wood-cuts on pages 331 and 332 of the "larger work," it is a reproduction in *fac-simile* of the fourth and fifth chapters of the treatise, which has already occupied a sufficient amount of our space.

But yet there are one or two points about the book before us which require some notice. In the first place, Dr. Garratt calls it a compendium, and in the preface he speaks of it as a synopsis, or rather a condensation, of a portion of his "larger work." It is in no sense a compendium, synopsis, or condensation. It is, as we have said, nothing more nor less than a wholesale extraction, *verbatim et literatim*, with the exceptions above noted of

the fourth and fifth chapters of that work. The title, therefore, conveys a false idea to the reader, and the preface repeats the deception. To be sure, Dr. Garratt states that the complete electrotype plates of the "larger work" are used, but this admission is made solely for the purpose of explaining the existence of reference figures to subjects and cuts not found in the present book.

That our readers may see that Dr. Garratt has not improved his style of English composition, we quote the following passage from the thirty-seven lines of new matter prefixed to the first chapter:

"If simply holding two *handle* electrodes of an active battery respectively in the two hands of the patient—or while one is thus held the other is somewhere applied over the head, body, or limbs—or the patient is to be shocked, no matter how—evidently but very little skill is demanded in the application of electricity, and scarcely could it be termed an art."

If the object should be merely to "shock" the patient, "no matter how," we would suggest that, if he have a love for the English language in its purity, he be asked to read the foregoing sentence. If that does not "shock" him, we should be disposed to despair of effecting this object with electricity.

On pages 29 and 30, where the remainder of the new matter (forty-five lines) is to be found, a meager description of Farmer's new thermo-electric battery is given. The account of Chester's battery, which appears on the corresponding pages of the "larger work," is omitted.

We hope it is not Dr. Garratt's intention to republish the remaining chapters of his "larger work" in separate form. We have taken the entire dose once, and decidedly object to having it repeated *ad nauseam* in subdivided portions.

The publishers have done their work well, with the exception that the lettering on the back of the cover, for which we believe they—not Dr. Garratt—are responsible, is simple nonsense.

ART. IV.—*The Renewal of Life. Lectures Chiefly Clinical.* By THOMAS KING CHAMBERS, M.D., Honorary Physician to H. R. H. the Prince of Wales, &c., &c. Second American from the Fourth London Edition. Philadelphia: Lindsay & Blakiston, 1866. 8vo, pp. 646.

THIS second edition of Dr. Chambers's lectures does not differ materially from the first, which received a somewhat extended review in our columns. The author was prevented, by a severe illness of eighteen months' duration, from prosecuting his clinical studies, and when, on his recovery, there was a demand for another edition of his book, he had no new material to add. Much of the old, however, is worked over, and presented in a form less obnoxious to that unkind criticism it originally received. The index from the last edition is appended, and the book thereby made much more convenient for reference.

Dr. Chambers is one of the few clinical instructors who dares honestly to teach what he practices, and refuses to be bound by old-time theories, or a deference to the opinion of others where experience has carried him in advance of these opinions and theories. And it is by reason of this that we have here the most progressive book on clinical medicine that has appeared for many a year. Progressive, we mean, not in adducing new theories of disease, or originating novel views of treatment, but in openly and boldly attacking that system of spoliative therapeutics which has so long ruled the medical world, and in enunciating in terse, almost epigrammatic language, those grand principles of reconstructive treatment which, we are sure, will be found to square exactly with the experience of our keenest observers and most successful practitioners. We are no believers in the destructive and sanguinary teachings of our forefathers in medicine, and this lack of faith in a system that is respectable only from its antiquity, is the result of observation, and does not turn upon any theo-

retical views we may entertain of the "change of type" in disease. This question, of course, has an important bearing upon treatment, and in all systematic courses of instruction should receive full attention, as indeed it has already engaged the earnest consideration of many of the ablest representatives of our profession. But we do not purpose to discuss it here. We desire simply to state our deliberate conviction in view of the fact that it is the physician's duty, first to prevent, and then to cure disease, that the "reconstructive" system of medicine is the one which will produce the most satisfactory results, and is the only system grounded upon true principles. And we know of no book where the system is so ably advocated and so well put as in the volume before us. It is especially to the younger members of the profession that we would commend it. They cannot go wrong if they abide by its teachings. Their minds are pliable, and they can better appreciate the practical value of the system than the older men who are wedded to belief and accustomed to routine. And it is to this rising class that we must look for the "Renewal of Life" in medicine.

ART. V.—*Watson Abridged: A Synopsis of the Lectures on the Principles and Practice of Physic, delivered at King's College, London, By* THOMAS WATSON, M.D., etc., etc. *Abridged from the last English Edition; With a Concise but Complete Account of the Properties, Uses, Preparations, Doses, etc. (taken from the U. S. Dispensatory), of all the Medicines mentioned in these Lectures, and with other valuable Additions.* By J. J. MEYLOR, A.M., M.D. Philadelphia: Published by the Author, 1867. 12mo, pp. 277.

IN the conscientious doing of his duty, the reviewer has every now and then an ungracious task; and such is the case in this instance. The author of *Watson*

Abridged has no doubt been prompted to his work by honest and praiseworthy motives; but while we may respect the intent, we cannot applaud the deed. We have always had a great admiration for the *Lectures on the Principles and Practice of Physic*, and still read them with as much pleasure as we did a quarter of a century ago, when they were first published. But we fully appreciate what Sir Thomas Watson says in the letter which Dr. Meylor prints with his Preface: "Our common profession is making such large advances every year, that a work on the Practice of Physic must very soon become stale and defective." We hold that *Watson Abridged* is not the book to put into the hands of either the student or young practitioner (for whom it is designed) as a guide for practical medicine, not only because we object to the stunting system of cramming with spoon-food, but also for the reason that it does not represent the Principles or Practice of Physic of the day; nor, as we have good reason to believe, does it fairly give the present views, on some of the most important points of pathology and therapeutics, of the distinguished President of the Royal College of Physicians, who is eminently progressive and keeps abreast with the wonderful advance that both the science and art of Medicine have made within the past few years. In this shadow of the original, we miss, too, one of its chiefest merits—its charming style and pure and vigorous English.

> "The wine of life is drawn, and the mere lees
> Is left this vault to brag of."

Reports on the Progress of Medicine.

THEORY AND PRACTICE OF MEDICINE.

ART. 1.—*The Modern Treatment of Pneumonia in Young Children.* (*Edinburgh Med. Jour.*, November, 1866.)

DR. G. STEVENSON SMITH, resident medical officer at the Royal Hospital for Children, in Edinburgh, gives a

sketch of the plan adopted at that institution in the treatment of pneumonia in young children, and narrates several typical cases, from which he is led to the conclusion that harshness or puerility of respiration preceding crepitation is the initial auscultatory sign in this disease in children, as was long ago pointed out by Stokes, but strenuously denied by Grisolle and other authorities.

In speaking of the treatment, he says:

"In all cases of acute pneumonia, the degree of fever, the strength of the patient as ascertained by the state of the pulse, and the extent of the disease, are taken into account before any remedy is prescribed. If the disease is in its first stage, and the fever is high, and especially if the pulse is good, small doses of antimonial and ipecacuana wines, with the aqua acetatis ammoniæ and syrup are ordered; five or more drops of each of the wines, according to the age, being given every three hours. Occasionally, small doses of dilute nitric acid and tincture of digitalis are given. But in the greater number of cases admitted, it is found that even this very mild treatment is too active, the little patients being in such a prostrated condition as to require stimulants and good nourishment from the first. In such circumstances, a mixture of spiritus ammon. arom. with sweet spirits of nitre is prescribed, along with a dessert-spoonful of wine every three hours, and plenty of milk and good beef-tea. But in all cases the diet is liberal, the patient being generally allowed to take anything in the way of fluid nourishment he may prefer. In the pneumonia of young children, it is unusual to have a great amount of coughing; but when an irritable cough does annoy the patient, a few grains of hydrarg. c. creta and Dover's powder generally act like a charm.

"In every case during the continuance of the acute symptoms, warm-water fomentations are constantly applied all round the chest, and give great comfort, and if there is much dyspnœa, afford great relief to the child. The best way of applying the fomentation is to have a

flannel bandage of sufficient length and breadth to go round and cover the whole of the chest, wrung out of hot water and applied; then, on the outside of it a roller of Mackintosh waterproof-cloth is put, care being taken to have the Mackintosh sufficiently large to cover the flannel entirely. By this means the flannel is kept moist and warm for a considerable time, and the whole chest is surrounded by a warm, moist vapor. This method will be found to be quite as beneficial as poulticing while it is far less troublesome and much better liked by the child.

"As a rule, this is all the treatment that is found to be necessary in the acute stage. *Since the Hospital was opened, some six years ago, not a single drop of blood has ever been taken from a pneumonia patient.* In the more advanced stages of the disease, the application of the liniment. croton. tig., or the brushing on of the tinct. of iodine, is sometimes found to be beneficial in promoting the absorption of the inflammatory products.

"During convalescence, a ferruginous tonic with cod-liver oil is usually prescribed.

"From this short outline, it will be apparent that the practice followed is essentially restorative, in the sense that no remedies are used which may depress the patient's powers, while a liberal amount of nourishment is given, with wine, if necessary, from the very first. But it will also be observed that each case is treated according to its own peculiar characteristics, and not upon general principles merely. If the disease is very acute, and the child has previously been robust, small doses of antimony and ipecacuanha are given, and their effects are carefully watched. If, on the other hand, as is most frequently the case, the pulse is small and compressible, and the child has little vital energy, nature's efforts to bear up till the force of the disease has spent itself are aided by the administration of stimulants, the aromatic spirit of ammonia, and the like.

"It is plain, therefore, that although neither depletion nor depression is had recourse to, the treatment is,

nevertheless, very different from a merely expectorant or do-nothing method, recommended by some physicians, and which is apparently based on the belief that inflammation of the lung coming on in children previously healthy terminates generally in recovery. But although it is now admitted that almost all the acute affections of early life have a tendency to end in recovery, surely that is no reason why the physician should stand idly by, and refuse to aid, as he often may do most effectually, the efforts of nature to overcome disease.

"And I have no hesitation in saying that the plan pursued at the Edinburgh Children's Hospital will be found to be all that is necessary in the majority of acute uncomplicated cases to conduct the malady to a favorable termination.

"The tabular statements of the results of all the cases treated for several years in this Hospital show that pneumonia in young children is by no means a very fatal disease, but, on the contrary, its tendency, under judicious management, and by the avoidance of the depleting and weakening plan of treatment, is to recovery."

ART. 2.—*Paralysis of the Pneumogastric Nerve.* (*British Medical Journal*, Dec. 1.)

PROF. WOLFF, of Berlin, narrates the following interesting case, as an appendix to a lengthy paper on defective innervation of the heart. The paper is published in the *Deutsche Klinik*, of October 23d, 1866.

"General von S., a friend of the deceased, aged 68, otherwise robust, had for about a year complained of an annoying pain in the occiput, periodically recurring, and which required the head to be supported; when, on a sudden, he was seized with symptoms which could only be accounted for by the assumption of a beginning paralysis of the par vagum. The three functions over which these nerves preside were simultaneously and equally affected; the appetite gave way entirely, and

during the two weeks that the illness lasted, could not by any means whatever be restored. With great reluctance, the patient contrived, in submission to medical order, to swallow a small quantity of food or beverage. The respiration slackened more and more; and on one of his last days, there were counted forty-four seconds between two respirations. *Pari passu* declined the movements of the heart. As its impulse and sounds grew feebler, so the pulse vanished in the extremities, and at length could no more be felt in the crural and radial arteries. During the two last days of life, it was by the stethoscope only that a faint vibration of the heart could be perceived. Along with the pulse went also the warmth of the extremities. 'However, gangrene of the feet did not ensue; the occurrence of which I had occasion to observe (together with Drs. Romberg and Riese) about the same time in a patient who succumbed to fatty disease of the heart, and in whose case the pulse and temperature had likewise fallen off in the lower extremities during the last days of life.' Death, which ensued at the commencement of the third week of illness, while the patient remained conscious to his last breath, was in the true sense of the word an 'extinction' of life. The cranial cavity was not allowed to be opened."

ART. 3.—*A Silver Fork swallowed and discharged by an Abscess in the Hypogastric Region.—Recovery.* By Dr. A. H. VAN ANDEL. (*La France Medicale*, January 9th, 1867.)

A WOMAN, aged 64 years, and affected with melancholia, was admitted, August 31st, to the Asylum for the Insane at Zutphen. Some days before her entrance, she had swallowed a silver fork. She was desirous of following the example of a recent patient, who had committed suicide by swallowing a fork, and on whom gastrotomy was performed, the patient dying a few days subsequently. When the patient was seen, she

was very calm, and expressed a desire to be operated upon as soon as possible. Repeated examinations were made, to discover the presence of any foreign body in the stomach. The shape and direction of this organ left no doubt that the fork was actually in the stomach, and that its point was directed forward and upward, the handle a little backward and in the direction of the pylorus. There was no complaining of pain, but a feeling of uneasiness in the epigastric region. Neither the general nor local condition of the patient presented grave symptoms. No active treatment was employed. On December 6th, the points of the fork—which, up to this time, could be felt with the fingers—were not noticeable on palpation; and there was observed on the left side of the abdomen, a little above the umbilicus, a tumor somewhat of the size and shape of a gravid uterus of four months. Beyond this, there was no severe symptom. The tumor remained in the same condition for many months; but in April, it became less regular in outline. In place of being convex, it now presented a depression at its lower part, which was painful to the touch, and the skin was adherent over it. In the month of May, an abscess formed, on a level with this depression, about three fingers' breadth above and to the left of the umbilicus. Swelling, puffiness, and redness of the skin increased; and on June 9th, the abscess opened spontaneously, permitting a little pus, and some brownish-colored and fetid fecal matter, to escape through the minute opening. A careful examination of the fistula failed to discover any traces of the fork. "On June 12th," says M. Andel, "I was witness to a rare sight. The four prongs of the fork were projecting two thirds of their length through the walls of the abdomen, on a level with the fistula. MM. Darchys and Zehn can verify this. On careful manipulation, the fork could not be wholly reached, by reason of the intervention of the walls of the abscess. Two incisions made, one on either side of the prongs, allowed the removal of the fork, which had a perpendicular direc-

tion, as was ascertained. The handle was covered with fecal matter, brown-colored and stinking. Being washed, it was of a grayish-black color, and numerous crystals were deposited about the middle of the shank. A chemical examination showed that the color was due to the sulphuret of silver, and that the crystals were formed of calcareous phosphates. The fistula was dressed, and the discharges, which flowed away on the following day, were examined with care, but found to contain only fecal matter. The opening of the fistula became smaller; the discharges diminished; and on July 14th, cicatrization was complete."

The *Journal d'Amsterdam*, from which we take this account, accompanies it by some remarks worth reproducing. "The author," says our cotemporary, "lays stress upon the reasons which induced him not to perform gastrotomy, and upon the happy and unhoped-for results of his expectant treatment. Furthermore, the case is not without analogous examples. Michel Hager reports that Dr. Sonderland had under observation a young woman nineteen years of age, who swallowed two iron forks, which were discharged by an abscess ten months subsequently. Again, Fedeli notices the case of a woman eighty years of age, where an iron fork remained in the alimentary canal for two years, and was discharged by an abscess in the right hypochondriac region. Schwab, on the other hand, extracted by gastrotomy a fork which had remained two hundred and twenty-nine days in the stomach of a young woman twenty-four years of age. From all these facts, to which, doubtless, other analagous ones could be added, it follows that the best policy in such cases is not to resort to gastrotomy, but to leave the expulsive tendency of the body to work out the result."

The very remarkable absence of any grave symptoms was wholly in support of the plan adopted by M. Andel.

ART. 4.—*Treatment of Chronic Pharyngitis.* (*Cincinnati Lancet and Observer*, November, 1866.)

DR. J. R. BLACK, of Newark, Ohio, in an article on the above subject, says:

"In those cases in which there is no obvious general indication to fill, one or the other of the applications to be mentioned have rarely failed to give prompt relief, and, when persevered in, to effect a radical cure. ℞ tinct. iodinii, glycerinæ, aa. ʒss., bals. fir. ʒj ss. Apply to the irritated or ulcerated parts, once daily, with a camel's-hair brush. This preparation diffuses itself rapidly over the fauces, soothing the irritation, and clearing the throat by free expectoration. When the inflammation has extended into the nasal cavity, the most convenient and practicable mode of reaching it with the medicine is by insufflation. Pour half a teaspoonful into the palm of the hand, or on a bit of sized paper, apply closely to one nostril, close the other with the finger, and give a forcible inspiration. In case the disease has extended into the larynx, and become chronic, the tincture of iodine mixed with spirits of ether, comp. and used by inhaling the vapor, gives very gratifying results. This may be used once or twice daily.

"From some idiosyncrasy or other inexplicable reason, the above remedy does not always have its usual curative virtues, in which instances the following elegant preparation will be found strikingly beneficial. The active ingredient is the same used in Luly's patent nostrum. ℞ hyd. bichloridi, grs. viii.; ammon. muriatis, grs. xx.; glycerinæ; aquæ rosarum, aa. ʒss. M. Apply as above, though greater caution is required against swallowing any of the mixture."

ART. 5.—*Treatment of the Congestive Stage of Ague.* (*Richmond Med. Jour.*, July, 1866.)

DR. PORCHER, of Charleston, S. C., reports the most satisfactory results in lessening the intensity, if not in

shortening the duration, of the congestive stage of intermittents, from a mixture of tinct. gentianæ, spts. etheris comp., and tinct. capsici, *aeq. partes*. He says the efficacy of the subsequent anti-periodic treatment seems to be increased by the previous employment of this formula; for it is during the cold stage, in proportion to its intensity, that those morbid alterations occur which are productive of so much subsequent disturbance of the glands and excretory organs.

SURGERY.

ART. 6.—*Dislocation of the Radius and Ulna forward at the Elbow without Fracture.* (*Lancet*, Jan. 19th, 1867.)

A CASE of this very rare dislocation occurred at University College Hospital the week before last, during the frost. A strong young man, of twenty years of age, slipped down on the pavement, falling on his left elbow. On getting up, he found he could scarcely move the elbow, which was so painful that he applied immediately at the Hospital. On examining him, about twenty minutes after the fall, Mr. J. W. Langmore, the house-surgeon, found that there was some swelling and a slight bruise over the prominence of the elbow, with but little swelling elsewhere. The arm was bent at an angle of about 130°. but could be flexed to a right angle and straightened to about 160°, although all movement gave the patient great pain. The forearm was about three quarters of an inch longer than its fellow. The condyles of the humerus were nearly on a level with the olecranon, which was displaced forward, the tendon of the triceps muscle being very tightly stretched round the end of the humerus. The sigmoid notch could be felt. The head of the radius could also be felt in front of the lower end of the humerus. Mr. Langmore replaced the ulna by bending the elbow across his knee, and then, as the radius was still dislocated, he reduced it by pressure on its head while good extension was made by assistants. The arm was then put on a straight splint,

and an evaporating lotion applied. A certain amount of heat and swelling ensued, but by the fourth day this subsided and the joint was quite movable.

ART. 7.—*Novel Method of Dealing with Ligatures applied to Arteries.* (*Idem.*)

MR. CAMPBELL DE MORGAN has been adopting, of late, at the Middlesex Hospital, a plan of dealing with ligatures applied to vessels during a cutting operation, which merits notice. When the vessels have been tied, instead of following the usual custom, and leaving the ligatures hanging out of the wound, Mr. De Morgan, by means of a needle, passes them through the skin close to where they are tied. They remain quite quiet, and come away without the slightest pain or trouble when their work is done. The wound, consequently, has nothing to irritate it, and enjoys every opportunity of healing by the first intention. The plan leaves the parts as quiet as if acupressure had been applied.

[This plan of disposing of ligatures is nothing new. It has been frequently used in this city by Prof Van Buren and other surgeons. It has been found in many cases to be of good service.—ED. N. Y. M. J.]

ART. 8.—*Trousseau's Syrup of Lime in the Treatment of Acute Rheumatism.* (Boston *Med. and Surg. Jour.*, Feb. 28.)

DR. CHARLES E. BUCKINGHAM, of Boston, writes as follows:

"Having for a year past used what I consider a new remedy for rheumatism, and with better success than from any other remedy, I consider it proper to ask the profession to make a trial of it. It is the syrup of lime, made according to Trousseau's prescription, as found in Parrish's Pharmacy. I have used it, according to the severity of the case and the age of the patient, in the dose of ten (10) drops to forty-five (45) drops, and repeated in from two (2) to six (6) hours, as symptoms have seemed to demand. In but one (1) case has any

opiate been required from the beginning. Two (2) cases were complicated with Bright's disease, as indicated by the great abundance of albumen and the casts, as seen in the urine. In one of these the albuminuria entirely disappeared, and in the other it has been largely diminished.

"There has been no constipation, but generally looseness of the bowels, after a couple of days' treatment.

"The medicine is best taken in unskimmed milk, in quantity from a table-spoonful to four (4) ounces, according to the size of the dose of syrup."

For the information of our readers, we copy from Parrish's Pharmacy the prescription alluded to in the communication above:

"Calx Saccharatum, Syrupus Calcis.—Trousseau used the following proportions for producing a solution of lime by the aid of sugar: 1 part of slaked lime, 10 parts water, and 100 parts syrup are boiled together for a few minutes, strained and diluted with four times the weight of simple syrup.

"This syrup has an alkaline taste and reäction, and is the solution of a chemical compound of sugar and lime. It is used for the same purposes as lime-water, but on account of its causticity it is necessary to dilute it considerably. It is given to children in the quantity of twenty or thirty grains during the day; adults take from two to three drachms during the same time."

Parrish's formula as above given is incorrect.

"Trousseau's own statement is of a syrup saturated with lime. '*Il se prépare en saturant le sirop de sucre par le chaux et en filtrant.*' On looking at Parrish, I find that it is to be made of *slaked lime.* This is entirely wrong. *It should be made of caustic lime.* The best formula would be to mix two (2) ounces of lime unslaked and eight (8) ounces of sugar together in the mortar, and pour over the mixture a wine pint of boiling water. Filter and add boiling water enough to make up the pint. By the use of boiling water, the operation is more rapid, and the formation of lumps is avoided. Of

this I have given as much as forty-five (45) drops every two (2) hours in one case of acute rheumatism. Generally thirty-five (35) drops in half (½) a tumblerful of milk every three (3) hours have been enough. The diet in my cases has been left to the patient's choice."

MATERIA MEDICA AND THERAPEUTICS.

ART. 9.—*The Action and Therapeutical Value of Cimicifuga Racemosa.* (*Medical and Surg. Rep.*, Feb. 9.)

DR. D. A. MORSE, of Alliance, Ohio, in a paper on this subject, thus estimates the value of this article:

"In chorea, hysteria, and neuralgic affections, combined with quinine and iron, it has no equal in the materia medica. As an evidence that the additional remedies are not the successful agents, we have repeatedly known them to fail until the cimicifuga was added.

"In diphtheria, attended with great prostration, a warm infusion, with two-grain doses of quinine, will often cause the most alarming symptoms to abate. It produces copious perspiration, the pulse assumes a more normal condition, and great relief is obtained. The elimination of the poison is aided, irritation removed, the patient supported, and we are able to hope for a more favorable termination. Other remedies may be administered as indicated.

"In irritative dyspepsia, combined with quinine, it gives tone to the debilitated nervous system.

"The remedy must be continued for a long time. There is no class of cases in which this is of greater necessity than in hysteria and disordered menstruation. If continued for several weeks, it will afford relief.

"It is common for many to administer cohosh until the female passes the menstrual period. If she has suffered pain, it is suspended, and something else substituted. This should not be done, but the remedy continued, and it will be rare cases that will resist its influence more than two months before improvement is manifested. For the exhausted student, or for exhaus-

tion from physical exertion, it is far more useful in procuring sleep than a '*night-cap*' of *toddy*. It is more useful in debility from loss of semen than bromide of potassium. In these cases, combined with quinine, I have never known it fail in giving relief. It gives tone to the nervous system, removes irritation, procures sound and refreshing sleep, and cannot be dispensed with. It is an invaluable agent in spermatorrhœa, and will prevent nocturnal emissions. Its whole action is directed to the nervous system; and when it is desirable to correct long-standing disorder, it must be continued often for months."

Varia.

Mr. Bergh and the Doctors.—The world is occasionally favored with the advent, among other remarkable curiosities, of certain enthusiastic persons, endowed with much zeal and but little knowledge, who are afflicted with a "mission." Their mission consists, in a majority of cases, in the detection of some intolerable abuse which has hitherto escaped observation, but for whose discovery and correction mankind is to be indebted to their meritorious labors. From the immortal Quixote and his leather wine-bags, to Cotton Mather and the Salem witches, a strong family likeness exists between the subjects of these psychological phenomena. A presumptuous readiness to deal with subjects of which they are ignorant, and a sublime recklessness of the consequences, to everything beside their own favorite hallucination, form the larger part of the requisites for their mental organization. Mingled with these traits is a very considerable element of egotism, and an insatiable thirst for notoriety, which can be most quickly and easily gratified by attacking some supposed abuse connected with existing customs, and so riding into notice upon a train which is already in motion.

Of course, it is no part of the plan of these unhesitating reformers to make themselves acquainted with

the real character of the objects to which they direct their attention. They do not stop to think whether their extravagancies are liable to injure innocent parties, or to damage any institution really valuable to the public. They appear to feel no moral responsibility in this respect, and are quite ready to fire into the tree, no matter whether they bring down crows or chickens, provided they do execution of some sort, and at the same time make a sufficient amount of noise.

It appears just now to be the ambition of Mr. Henry Bergh, President of the Society for the Prevention of Cruelty to Animals, to place himself in the list of these unprofitable enthusiasts. The Society was organized, principally by his movements, in the early part of the last year; and as the ostensible purpose of such an enterprise is one which readily commends itself to all men of liberal and humane feelings, the concurrence of a number of prominent citizens was easily secured. The originator of the Society, having thus brought it into existence, and having, as it is said, no other occupation, was naturally made president of the organization, and became at once the principal, if not the only, agent by whom its affairs were directed. Such a society, if managed with judgment and care, or even with an ordinary amount of genuine philanthropy, might be the means of effecting great good, and would easily enlist the general sympathy in its support. But it soon became evident that these qualities were lamentably deficient in the management of the Society, and that its practical working was liable to become, in many respects, an object of merited ridicule.

At an early period, Mr. Bergh made certain onslaughts upon the dealers in turtles and chickens, which afforded a passing amusement to the readers of the hebdomadal press, in which they were recorded as the vagaries of an over-enthusiastic reformer. But his attention was soon turned from these lesser reforms to subjects of a more prominent nature; and the eagerness with which he followed up a supposed abuse gave rise to a certain acri-

mony in the manner of doing so, which was, to say the least, a curious mental phenomenon. It would seem as if an unusual tenderness for the lower animals were necessarily accompanied by a peculiar animosity toward the human species; and in Mr. Bergh's case, this found expression in the most liberal denunciation of those to whom his official communications were addressed. One of the most singular of these communications was sent, a short time ago, to the managers of Barnum's Museum.

It should be known that, among the other curiosities of this Museum, there are maintained, for the delectation and improvement of the public, a few anacondas, which are kept in a state as nearly approaching to vitality as possible, by artificial warmth beneath their cages. They pass the greater part of their time in a semi-comatose condition, waking up once in two or three months, to take a little exercise and refreshment, and then relapsing into quiescence for another period of inactivity. Their food consists of live rabbits and pigeons, which they seize with avidity when roused by the calls of hunger, crush to death between their folds, and then swallow whole. Probably no more merciful way than this could be devised for killing the victim and at the same time preparing him for deglutition. At all events, this is the method provided by the Creator, and that by which the serpent naturally takes his food.

Mr. Bergh, however, considers it an outrage. He accordingly denounces it in the following letter of remonstrance and interdiction, which was sent, as before stated, to the managers of the Museum:

"Rooms of the Society, No. 826 Broadway,
Corner of 12th Street,

New York, Dec. 11th, 1866.

(Seal of the Society and List of Officers.)

"Gentlemen:

"I some time since called at Barnum's Museum for

the purpose of protesting against the cruel mode of feeding the snake which is there on exhibition.

"The gentleman whom I spoke with, who informed me that he was acting for Mr. Barnum in his absence, expressed his willingness to exert his influence to have the evil corrected.

"Nothing, it seems, has been done in that direction, as I am at this moment informed, by a gentleman who was present some four weeks ago, that he witnessed the feeding of this animal, along with the other spectators, and pronounces the scene cruel and demoralizing in the extreme; several live animals having been thrown into its cage, to be slowly devoured!

"I boast of no finer sensibilities than other men, but I assert, without fear of contradiction, that any person who can commit an atrocity such as the one I complain of is semi-barbarian in his instincts. It is with a view to prevent and punish such offenses that this Society has been created and laws enacted.

"It may be urged that these reptiles will not eat dead food. In reply to this, I have only to say, then let them starve; for it is contrary to the merciful providence of God that wrong should be committed in order to accomplish a supposed right.

"But I am satisfied that this assertion is false in theory and practice, for no living creature will allow itself to perish of hunger with food before it, be the aliment dead or alive.

"I, therefore, am led to the conclusion that this cruel deed is a part of the spectacle, in total disregard of the demoralizing effects of it, or the inhumanity which results therefrom.

"I have, therefore, respectfully to apprize you that, on the next occurrence of this cruel exhibition, the Society will take legal measures to punish the perpetrators of it.

"Your obt. servant,

"Henry Bergh,

"President.'

This is a most edifying announcement of what sort of an object it is for which Mr. Bergh considers that "this Society has been created and laws enacted." It would be curious to ascertain whether the other gentlemen, whose names appear in the list of officers, are of the same opinion.

The proposition made by the author of this letter, to starve Mr. Barnum's anacondas to death in order to prevent cruelty to animals, may certainly be called a brilliant suggestion. It is only equaled by the ready confidence with which he concludes that they *can* be made to eat dead food if they choose, and that feeding them with live rabbits is only intended for a spectacle, to gratify the "semi-barbarian instincts" of their keepers

Mr. Bergh is also aghast at the cruelties practised by the doctors. Their abominable mutilation of the animals upon which they experiment, and the tortures which they continually inflict upon their victims, fill his imagination and urge him to interference. He has published, for that purpose, a number of sensation articles in the daily newspapers on this subject, which have made their appearance at intervals for several months past, and in which he paints these professional atrocities in the liveliest colors and with the greatest freedom of delineation. It will be easily understood that most of the criticisms in which he indulges on this subject are directed at cruelties which have no existence, and that whenever his complaints have any semblance of a basis, it is one which he entirely misconceives and represents in a form altogether different from the reality. This does not prevent him, however, from proposing to regulate the practice of the doctors, and to visit them with the whole force of his moral and official interposition.

He has recently indicated this disposition in a characteristic letter addressed to Dr. Benjamin Howard, of this city. Dr. Howard is a practising physician in Thirty-first Street, who served with credit as Assistant Surgeon in the army during the war, and who now occupies the position of Ophthalmic Surgeon to the North-

Western Dispensary. A short time ago, Dr. Howard, having it in contemplation to perform the ligature of the subclavian artery, for a patient suffering from aneurism in the axilla, was desirous of ascertaining more fully the precise amount of ligation necessary to the efficiency of the operation. He had an idea that the artery might be successfully occluded without dividing its inner coat, and wished to satisfy himself how this could be accomplished with the least amount of injury to the adjacent parts. For this purpose, he procured a dog, and, with the assistance of two other medical men, carefully etherized the animal and then performed upon him the ligature of the subclavian, in the manner which he desired to test, as above. A short time after the operation, the animal was either lost or stolen from the place where he was kept; and a few days subsequently the Doctor received, from the "President of the Society for the Prevention of Cruelty to Animals," the following remarkable communication:

"Rooms of the Society,
"No. 826 Broadway, Corner of 12th Street,

"New York, March 5th, 1867.

(Seal of the Society and List of Officers.)

"Dr. Benjamin Howard:

"Sir: A complaint has been made to me that, a short time ago, you mutilated in the most cruel manner a dog, which was subsequently allowed to wander about the neighborhood in the dreadful condition in which you left it!

"Furthermore, that you are in the habit of dissecting these animals; and that the moral sense of the community thereabouts is shocked by the pitiful moans and howls of the tortured brutes.

"It is difficult to believe that *any* human being can perform these horrors without a feeling of remorse, but when it is a person (as in your case) that seems to be

surrounded by the elements of civilized life, in a marked degree, as I am informed, the difficulty becomes greater in proportion to these advantages.

"If the charge made against you be correct, I do not hesitate to say that you forfeit the respect and consideration of all good men and women, and expose yourself to prosecution and degrading punishment by the law.

"I invite your prompt attention to this subject, and remain, Yours, &c. &c.,

"HENRY BERGH, President."

It is difficult to decide which of the qualities of the foregoing letter are most deserving of admiration; its pitiable arrogance, or the profound indifference which it manifests to the merits of the case in which its author presumes to administer rebuke and admonition. A physician devoted to his calling uses all his endeavors to obtain the information requisite for the best treatment of his patient, and from the surest source—viz., the investigation of nature—and he is visited in consequence with such a denunciation as the above; which would be insulting in the extreme, were it not that its supreme folly must be too evident to make it annoying.

In order to provide greater facilities for carrying out the objects of the Society, a bill was introduced into the State Legislature during the present session, "For the More Effectual Prevention of Cruelty to Animals." As at first drawn, this bill was in such a form that it could easily have been used as a means of interference, more or less troublesome, with physiological and pathological investigations by medical men. The Senate, accordingly, very judiciously added to it a clause, providing that "Nothing in this Act shall be construed to prohibit or interfere with any properly conducted scientific experiments or investigations." On its transmission to the Assembly, however, with the above provision, Mr. Bergh urged the adoption of still another clause, making it obligatory to etherize the animals undergoing vivisection, and providing also that the ani-

mals operated on should be killed before recovering from their etherized condition.

The object of this proposal was evidently two-fold. First, it was intended for the purpose of throwing an undeserved and unnecessary odium upon physiological experiments, as actually performed by medical men, and of implying to the public that there is cruelty practised in this respect which requires legislative interference for its suppression. This would be a groundless and injurious imputation upon what is a most valuable and useful mode of investigation, and one which is actually conducted with every regard to propriety and humanity. In the second place, it was intended practically to defeat the protecting influence of the clause already introduced by the Senate. In regard to etherization, it is, of course, the constant habit to employ it in all appropriate cases. No physician would omit it, even if he consulted merely his own convenience and the ease of operating. But there are cases in which it is not needed, as in operating, for instance, upon nerves which are not sensitive; and there are other cases in which it would be inappropriate, as where it is required to ascertain whether a part be sensitive or not.

These last cases are very rare, but when they do occur are of great importance. For example, Sir Charles Bell, in 1821, discovered that no sensibility belongs to the facial nerve, but that it all resides in the adjacent fifth pair; and soon afterward Magendie discovered a similar distinction between the anterior and posterior roots of the spinal nerves. For the last forty years these facts have exerted the most important bearing upon medical knowledge and practice; and yet the effect of a provision, that similar experiments should *never* be performed without ether, would be to forbid that such discoveries as the above should ever be made in the State of New York. Such an enactment would certainly be going backward in legislation, and would produce effects which the Assembly would never seriously contemplate.

Also in regard to killing the animal as soon as the operation is performed. It is plain that this would sometimes defeat the whole object of the experiment, which in certain instances requires the observation of the animal to be continued for some time after the operation. For example, the "gastric fistula," by which physiologists have learned the properties and action of the gastric juice, is an experiment of this nature. The surgical operation is first performed (under the influence of ether), occupying perhaps five minutes. The wound. a small one, is then allowed to heal and become a fistula, which requires about three weeks. After that, the study of the gastric juice begins, and is aided by manipulations entirely painless to the animal, who is kept, during the whole subsequent period, in a perfectly comfortable condition. An amendment like that urged upon the Assembly would forbid all such investigations, for it would make them impracticable under the provisions of the law.

It is impossible to say at what time new emergencies may arise, calling for such investigations. It might be necessary, for example, in order to learn certain points in the pathology of cholera or rinderpest, should either of those diseases visit us next summer, to watch the effect, for several days continuously, of experiments performed upon animals. The above provision would make it impossible for us in New York to do so.

These difficulties, and many similar ones, would certainly be introduced by such a provision. It necessarily must be so, if a person like Mr. Bergh, profoundly ignorant of medical affairs, were allowed to prescribe the exact method in which scientific investigations should be made by medical men. Such details as these can certainly be left, with entire safety, to the judgment and discretion of those who make such subjects their professional study. It would be impossible otherwise to avoid injuring, however unintentionally, the cause of medical knowledge, and lowering the standard of professional acquirement in the State. It is to be hoped

that this aspect of the subject will receive the full consideration of the Legislature, and that nothing will be done injurious to the interests of medical science.

Deaths from Chloroform.—A death from the inhalation of chloroform recently happened in Bellevue Hospital, in the service of Prof. F. H. Hamilton. The case has been reported in full to the Pathological Society, and will appear in our columns in the regular proceedings of that Society.

In the *Chicago Medical Examiner* for January, Dr. C. R. Parke, of Bloomington, Illinois, reports the case of a young lady, æt. 20, who died from the effects of chloroform administered by inhalation. Three days previous to this event, she had taken chloroform, and while under its influence had six teeth extracted. The quantity used on the second occasion was one drachm which was given in three portions. After inhaling the first two portions, three teeth were extracted, and judging from Dr. P.'s account, it would seem that consciousness was not lost, and some pain was felt. "The remainder of the drachm of chloroform, about one third, was then poured on the sponge and given as before." Three other teeth were then quickly extracted. The patient suddenly became deathly pale—there was complete cessation of respiration—pulse scarcely perceptible for a minute, and then ceased entirely. There was also considerable congestion of the capillary circulation about the neck and upper portion of the chest, and dilatation of the pupils.

Every effort, by external stimulation, artificial respiration, and the application of the electro-galvanic battery was made to restore the patient, and continued persistently for three quarters of an hour, but to no effect.

Hunter vs. The Pall Mall Gazette.—A trial of great interest to the medical profession has just terminated in the London law courts. Dr. Hunter, a well-

known *advertising* doctor, brought an action against the *Pall Mall Gazette*, one of the highest class daily journals in this country. The *Pall Mall* had called attention to Hunter's advertisements, and condemned him as a quack in no measured terms. Hence the action of Hunter against Sharpe, the proprietor of the *Pall Mall.* Hunter laid his damages at £5000 ($24,000). After a trial lasting for several days, the jury returned a verdict for Hunter; damages one farthing. Dr. Hunter called numerous witnesses to prove his skill and reputation as a physician, but it turned out that all the witnesses were associates of his own, two of them being his partners. On the other hand, Mr. Sharpe called many of the most eminent men in London to prove the falsity of Hunter's advertisements. The verdict was quite in accordance with the facts of the case and the law as laid down by the Chief Justice before whom the case was tried. The *Pall Mall* was legally wrong, but morally right. Dr. Hunter previously practised in Canada, and has branch establishments in Dublin and Edinburgh. Dr. Hunter made an abortive attempt to prove that his advertising system was adopted and commonly practised by respectable medical men in America, both in Canada and the United States. This attempt, however, to throw a slur upon the profession at the other side of the Atlantic, by way of proving himself right, only brought discredit upon his case. The *Pall Mall Gazette* deserves the thanks of the public, and especially of the medical profession, for their courageous attack upon quackery.—*London Letter Med. and Surg. Rep.*

The Therapeutics of Inhalations.—Dr. J. Solis Cohen, of Philadelphia, is preparing for publication a work on this subject, and requests the assistance of the profession in supplying clinical facts. Contributions will be duly acknowledged. Information is more especially desired as to the results obtained from inhalations in the treatment of croup, diphtheria, œdema of the glottis, asthma and phthisis. When other medica-

tion has been used in connection with inhalations, care should be taken to form an estimate of the relative value of the two.

Convention of Medical Teachers.—At the meeting of the American Medical Association, held in the city of Baltimore, May 3d, 1866, the following resolution was adopted with much unanimity, and the undersigned appointed a committee to aid in carrying it into practical effect:

Resolved, That this Association earnestly requests the medical colleges of the country to hold a convention for the purpose of thoroughly revising the present system of Medical College instruction, and that a committee be appointed to aid in carrying the resolution into effect.

In fulfilling the duties enjoined on them, the undersigned respectfully and earnestly invite the Trustees and Faculty of each of the Medical Colleges in the United States to send representatives to a convention to be held in the city of Cincinnati, Ohio, on Friday preceding the next annual meeting of the American Medical Association—namely, on May 3d, 1867. We would also respectfully suggest that all delegates to such convention be prepared to consider fully and act upon the following subjects:

First. The adoption of a more uniform and just rate of lecture fees by all the colleges in this country.

Second. The propriety of increasing the length of the annual lecture term, and the number of professorships.

Third. The adoption of measures for securing more thorough attention, on the part of students, to the more elementary branches of medical science, and a more progressive order of medical studies.

Fourth. The practicability of requiring three annual courses of lectures, instead of two, as a condition of graduation; and of making hospital clinical instruction a necessary part of the third course.

Fifth. The practicability of establishing and exacting

some appropriate standard of preliminary education for young men proposing to enter upon the study of medicine.

Feeling confident that a free interchange of views upon these and such other topics as the convention might deem proper would result in the adoption of measures of great importance to the interests, honor and usefulness of our profession, we again cordially and earnestly invite your coöperation.

N. S. Davis, S. D. Gross, Worthington Hooker, M. B. Wright, Geo. C. Shattuck—*Committee.*

American Medical Association. — The Eighteenth Annual Meeting of this Association will be held at Cincinnati, Ohio, Tuesday, May 7th, 1867, at 11 A.M. Secretaries of all medical organizations are requested to forward lists of their delegates, as soon as elected, to the Permanent Secretary, Dr. W. B. Atkinson, Philadelphia, Pa.

Report on Vaccination to the French Academy of Medicine.—It is well for the public to be informed on the subject of small-pox and vaccination, for many errors prevail which ought to be corrected. Dr. Danet, charged by the Minister of the Interior to make investigations on the subject and to report to the Academy of Medicine the result of his researches after vaccinating 8,500 persons and 40 animals, and after an extensive observation running through several years, has just reported as follows to the Academy:

"*First.* Small-pox and cow-pox are two distinct diseases.

"*Second.* Vaccination does not predispose to other maladies.

"*Third.* Vaccination and small-pox lose after a certain time their power of preserving from small-pox.

"*Fourth.* Vaccine matter, therefore, no matter what may be the mode of preserving it, has need of being renewed.

"*Fifth* The predisposition to small-pox is so much the greater as the individual is younger or more aged.

"*Sixth.* Revaccination is an absolute necessity.

"*Seventh.* Those even who have had the small-pox ought to be revaccinated.

"*Eighth.* Vaccine matter, in passing through the human body, borrows from it its constitutional principles; it may, therefore, often be dangerous to vaccinate with vaccine matter from arm to arm. [The Academy of Medicine had already decided that so far at least as regarded syphilitic affection, it was only dangerous when blood was contained in the matter.]

"*Ninth.* The cow is refractory to the syphilitic virus.

"*Tenth.* The revaccination from the cow to man is the only one which presents all the guarantees of success and of security.

"*Eleventh.* A febrile condition is in general a cause of failure.

"*Twelfth.* Injection, for preserved vaccine matter, and the multiplicity of scarifications, in general, are the best means of success.

"*Thirteenth.* Preserved vaccine matter ought to be revivified by transplantation to the heifer.

"*Fourteenth.* Vaccine matter ought not to be used but from the fourth to the end of the sixth day after the operation, and never later.

The Paris Faculty of Medicine.—Six vacant Professorships at this School have just been filled, as follows: Professor of Pathology and General Therapeutics, Dr. Lasègue; Professor of Pathological Anatomy, Dr. Vulpian; Professor of Therapeutics and Materia Medica, Dr. Sée; Professor of External Pathology, Dr. Broca; Professor of Internal Pathology, Dr. Axenfeld; Second Professor of Internal Pathology, Dr. Hardy. These names are pretty well known to the younger generation of scientific men throughout the world, and they are names that will be heard from of-

ten in the great struggle which is to be made to maintain the School of Paris at the head of all others. To the above names of new Professors may be added the following well-known old ones, still engaged in teaching in the schools, or at the clinics of the hospitals: Messrs. Velpeau, Nelaton, Bouillaud, Claude Bernard, Charles Robin, Tardieu, Denonvilliers, Gosselin, Depaul, Pajot and Maisonneuve.

Hudson River State Hospital for the Insane.—The commissioners appointed to locate the Hudson River Asylum for the Insane, have accepted a site offered by the citizens of Poughkeepsie. Hospitals for the care and cure of the insane are a present need of the State. As shown by the able report of the late Dr. Willard, there were, in 1864, in the poor-houses of the State, one thousand three hundred and forty-five of this unfortunate class. The ratio of incurables is steadily increasing for the want of greater public accommodations for the early treatment of mental disease. It is the opinion of eminent medical authority, that "in a perfect state of things, where the best appliances which the science and skill of the age have provided for healing, are offered to the lunatics in as early a stage of their malady as they are to those who are attacked with fever or dysentery, probably eighty, possibly ninety per cent, would be restored." The Asylum at Utica, large as it is, is wholly inadequate to the demands of the State; besides, its distance from remote counties virtually excludes many who would otherwise receive its care. Careful computation has demonstrated that, during twenty years of its able management and successful operation, the advantages of the Asylum to Oneida County have been more than double those enjoyed by the counties next beyond, but within sixty miles, and they are nearly three-fold those of the counties which are from sixty to one hundred and twenty miles distant. These facts prove that people will avail themselves of the benefits of these institutions some-

what in the ratio of their proximity to them.—*Annual Message of Governor Fenton.*

Death of Dr. Henry Bryant.—Dr. Bryant, of Boston, died at Porto Rico, W. I., on the 1st of February. Dr. Bryant was passing the winter in the West Indies, in the pursuit of health and the collection of objects of natural history. He was widely known as an enthusiastic ornithologist, and to his liberality the Boston Society of Natural History is indebted for the magnificent gift of the La Fresnaye collection of birds.

Medical Education in Great Britain.—According to a recent enactment in Great Britain, no medical student can be admitted to lectures until after a successful examination in the higher branches of an English education, and also mathematics and the Latin language. The examination for his final degree is not had until after attendance upon four winter sessions of lectures, or three winter and two summer sessions, including in each session all the branches of medicine, with physics, botany and general history.

Medical Colleges.—At the commencement of the Bellevue Hospital Medical College, holden February 28th, the degree of M.D. was conferred on one hundred and thirty-five members of the class. The address to the graduates was delivered by the Hon. J. G. Saxe, of Albany, and the valedictory by F. B. NcNeal, M.D., of the graduating class.

The Medical Department of the University of New York held their commencement on March 1st. The degree of M.D. was conferred on seventy-four graduates. The address was delivered by Professor J. C. Draper, M.D.

The annual commencement exercises of the College of Physicians and Surgeons, of this city, were held on March 14th. The degree of M.D. was conferred on

ninety-nine graduates. The address was delivered by the Rev. Dr. Bellows, and the valedictory by Wm. N. Palmer, M.D., of the graduating class.

The Rush Medical College, of Chicago, at its recent commencement, conferred the degree of M.D. upon seventy-two young gentlemen.

At the commencement of the Buffalo Medical College, N. Y., held January 26th, the degree of M.D. was conferred on forty graduates.

The Missouri Medical College, of St. Louis, Mo., at its recent commencement, conferred the degree of M.D. on twenty-one graduates.

The St. Louis Medical College, at its commencement, March 1st, conferred the degree of M.D. on fifty-three graduates.

Appointments.—*College of Physicians and Surgeons* of New York.—Dr. William A. Hammond has been appointed Lecturer on Mental and Nervous Diseases in the College of Physicians and Surgeons of this city.

Rush Medical College of Chicago.—Prof. Moses Gunn, of the University of Michigan, has been appointed to the Chair of Surgery, made vacant by the death of Prof. Brainerd. It is announced that he has accepted the position. Prof. J. V. Z. Blaney succeeds the late Professor, as President of the Rush Medical College. A Professorship of Surgical Anatomy and Military Surgery has been created, to which Dr. Edwin Powell has been appointed.

Massachusetts General Hospital.—Dr. James C. White has been appointed Visiting Physician, to fill the vacancy caused by the death of Dr. A. A. Gould.

Harvard Medical College.—Dr. James C. White, of Boston, has been elected Adjunct Professor of Chemistry. Dr. White, who was one of the Editors of the *Boston Medical and Surgical Journal*, has retired from his editorial duties, and is succeeded by Luther Parks, Jr., M.D.

Dr. J. A. Emmerton, late Surgeon 2d Mass. Artil-

lery, has been appointed Assistant Physician in the New York State Lunatic Asylum, at Utica.

Dr. R. J. Patterson, late Superintendent of the Iowa State Lunatic Asylum, has received the appointment of Professor of Medical Jurisprudence, in the Chicago Medical College.

Dr. Isaac Ray, for twenty years Superintendent of the Butler Insane Asylum, at Providence, R. I., has been compelled, on account of ill health, to resign his position. Dr. John W. Sawyer, late of the Wisconsin State Asylum, succeeds him.

Medical College of Georgia.—Prof. S. P. Garvin has resigned the chair of Materia Medica and Therapeutics, and Dr. Wm. N. Doughty, of Augusta, Ga., is appointed to fill the vacancy thus created. The degree of M.D. was conferred on twenty-two graduates of this College, at the recent commencement.

Harvard College—Medical Department.—The commencement exercises were held on the 13th of March, and the degree of M.D. was conferred on fifty-four graduates. The address was delivered by Prof. Agassiz. His subject was the application of experimental physiology to medical science.

Owing to the length of Dr. Markoe's valuable Memoir, and our indisposition to lessen its interest by dividing it, we have been obliged to add eight pages to the present number of the Journal.

Prof. Nathan R. Smith has in press a work on Fractures of the Lower Extremity, and the use of the Anterior Wire Splint. A notice of it will be found in our advertising columns.

In our next issue, we shall publish Dr. Thebaud's report of his operation for Elephantiasis of the Scrotum. This case has already attracted much attention, both at home and abroad. The paper will be fully and superbly illustrated.

[Advertisement.]

Physiological and Therapeutical Action of Cod-Liver Oil.

"THE minute division of the Iodine in Cod-Liver Oil, the particular state in which it exists, must singularly facilitate its absorption by the tissues, and can in this way contribute more than the absolute proportion of this substance, to the marked effects which this Oil exerts on the animal economy.

"Also Iodine in the Oil is not eliminated from the system, AS THE OTHER SOLUBLE PREPARATIONS OF IODINE: in this elementary combination its action is slower, more regular and more persistent, as it is successively set at liberty in the economy in proportion as Cod-Liver Oil is gradually decomposed in the blood."

BOUCHARDAT, Professor of Hygiene at the Academy of Medicine of Paris.—MANUEL DE MATIERE MEDICALE, pag. 749.—1856.

THE action of Cod-Liver Oil on the system is a double one; it is nourishing by its fatty elements, and curative by its medicinal bodies—Iodine, Bromine and Phosphorus—which it naturally contains; and to these three substances must be attributed its superiority over other fats or oils, either animal or vegetable, in the cure of diseases. These facts, discovered and proven by physiologists in their experiments on animals, and confirmed by the experience of physicians in their daily practice, have been corroborated during the last eight years, in a most illustrative manner, by the administration, to a large number of patients, of a Cod-Liver Oil (Fougera's) five times richer in Iodine, Bromine and Phosphorus, than any of the Cod-Liver Oils known before.

Cod-Liver Oil, as well as other fatty substances, when taken in too large quantities, is apt to disturb the stomach, and derange the functions of the intestinal canal. Only a small quantity can be digested and assimilated, the rest passing off unchanged, producing more or less frequent and abundant alvine evacuations, in which are contained the superfluous oils or fats. Observations prove that the gastric juice has no action

whatever on fats or oils, the pancreatic juice being the only body which, by its emulsive properties, causes the absorption of these substances into the economy; and, therefore, all the oil not emulsioned by the pancreatic juice is evacuated by the intestines just as it was taken. The knowledge of this important fact is due to the recent observations of Claude Bernard, a well-known authority in physiology. The oil, once emulsioned by the action of the pancreatic juice, is brought into the general current of the circulation as follows: it is first taken up by the chyliferous vessels on the surface of the small intestines, and passing through the mesenteric glands and the thoracic duct, it is discharged in the left subclavian vein, where it mingles with the venous blood returning to the right cavities of the heart. This blood, and the fresh nutritious elements furnished by the two subclavian veins, are pressed into the lungs to be there oxidized and altered; while passing through the pulmonary circulation, the oily molecules are modified and almost all of them destroyed. The blood, then, ready anew for nutrition, passes in the left ventricle, to be thence distributed through the arterial system, carrying along with it some oily globules left undecomposed during their speedy passage through the lungs, said oily globules being afterward successively altered in the circulating blood.

The medicinal oil, evidently brought undecomposed into the lungs, and partly in the general current of the circulation, is there modified, losing not only its emulsive form, but also its oleaginous characteristics, so as to constitute a part of the arterial blood. Iodine, Bro-

mine and Phosphorus are then set free, during the process of nutrition of the tissues, each part of our system appropriating to itself the substance it needs.

The tissues, in contact with the nutritious blood, having a tendency to appropriate to themselves the elements most proper to maintain their healthy condition, or to alter it, when unhealthy, is it not judicious to conclude that the lungs first, and then the rest of the system, when affected with Bronchitis, Phthisis, Scrofula, under any variety, or Rickets, &c., &c., are highly benefited by the healing and restorative action of the oil and its medicinal constituents, minutely, naturally, and persistently brought in contact with the diseased parts?

That oils and fats are successively carried through the economy and transformed, as above described, is amply demonstrated by the experiments of the most eminent modern physiologists, such as Claude Bernard, Tiedemann and Gmelin, Leuret and Lassaigne, Landras, Bouchardat, Blondlot, Delafond, Gruby, L. Corvisart, J. C. Dalton, Jr., A. Flint, R. Dunglison, &c.

We must not forget this important point, that oils or fats go into the blood undecomposed and unchanged, being merely infinitesimally divided by the pancreatic juice; but if an oil contains substances, in a close chemical combination, so that they cannot be easily separated, these substances will of course be carried into the blood with the oil itself. This is just the case with Fougera's Cod-Liver Oil, which contains a large proportion of *Iodine, Bromine and Phosphorus.* Iodine and Bromine have so strong an affinity for oil that they cannot be separated from it by chemical reägents, not even by strong sulphuric acid. They must, therefore, be carried with the blood and liberated when the oil is transformed, in the process of nutrition, into its elements, and becomes the chief agent by which the heat of the body is maintained. Knowing, then, that to the nutritive property of the oil is superadded the alterative, fluidifying and stimulating power of a comparatively

large quantity of Iodine, Bromine and Phosphorus, who can doubt the efficacy, as a medicine, of this new Cod-Liver Oil?

Phosphorus, a part of our brain and bones, is a powerful diffusible stimulant, exciting the nervous organs, heightening the muscular power and mental activity, and relieving the despondency of mind occasioned by many serious diseases.

Iodine and Bromine are superior to all alteratives for improving and purifying the depraved nature of the blood. They are the best remedies we possess for checking and controlling the swelling and induration of the glandular system, the ulcerative process in scrofulous complaints, the diseases of the lungs, &c. Obviously the main point, in such serious affections, is to check and control at once the ulcerative process, and to do so it is of the greatest importance to use PROMPT AND ACTIVE MEDICATION.

SUPERIORITY OF FOUGERA'S COD-LIVER OIL OVER SIMPLE COD-LIVER OIL.

Until of late, natural and pure Cod-Liver Oil has been the best remedy, and the one most generally used, with more or less success, in diseases of the lungs, when of a tuberculous character. The period of the malady, when the oil was first employed, and also the purity and strength of the remedy, accounting for the success or failure.

Pure Cod-Liver Oil is more likely to cure Consumption, Scrofula, Rickets, Swelling of the Glands, &c., in the first stage of the disease; in the second and third stages, it mitigates the severity of the symptoms and prolongs the life of the patient, but seldom saves it.

The reason for this difference of action is simply that the pure oil contains iodine, bromine and phosphorus only in minute quantities, which, although sufficient to cure a disease in the beginning, is not powerful enough when it assumes a graver type.

If we suppose for an instant the discovery of a new

natural Cod-liver Oil containing more iodine, bromine and phosphorus than the oil in present use, there is not the least doubt but that every physician would prescribe it in preference, fully confident of its enhanced qualities. The natural consequence of this proposition explains satisfactorily why the medical profession should give, *and do rightly give*, the preference to Fougera's Compound Iodinised Cod-Liver Oil, which contains a larger proportion of Iodine, Bromine and Phosphorus than the Oil in present use; these active elements, as before remarked, are in such a peculiar combination that their action is slow, regular and persistent, being successively set at liberty in the economy in proportion as the oil is decomposed in the process of animal life.

Some physicians are so well convinced that the curative properties of the oil reside in these three substances, that to obtain a full effect, they prescribe very large doses of the oil, sometimes giving two, three, and even four table-spoonfuls three or four times a day, the larger quantity amounting to no less than half a pint daily. That their object is not attained is fully proven by physiologists who have demonstrated that only the quantity of oil emulsionised by the pancreatic juice is digested and carried into the blood, the rest being lost and passed off nearly as taken.

Being deeply impressed with the above Physiological and chemical facts, Mr. E. Fougera instituted experiments, and, after many trials, has succeeded (1858) in preparing a *Compound Iodinised Cod-Liver Oil*, which is simply the best Newfoundland Cod-Liver Oil, combined with four times as much of iodine, bromine and phosphorus as it naturally contains.

Pure Cod-Liver Oil varies considerably in composition, as may be seen by comparing the different analyses published in works of chemistry and materia medica. A quart contains 1 to 4 grains of iodine, $\frac{1}{8}$ to $\frac{3}{4}$ of a grain of bromine, $\frac{1}{4}$ to $\frac{1}{2}$ of a grain of phosphorus. In 1860, Mr. E. Fougera published in the *Repertoire de Pharmacie*, edited by Professor Bouchardat, at Paris, the

formula of his oil, which contains per quart, in addition to the above quantities:

Iodine, 16 grains.
Bromine, 2 grains.
Phosphorus, 2 grains.

The combination is made so that the odor, taste and color of the natural oil are preserved.

Fougera's preparation being consequently five times more active than the richest commercial Cod-Liver Oil, will tend to restore health by its curative action thus enhanced, in a much shorter time than the simple kind, and attains the desired effect, where the other will fail.

The dose of this Oil is *only* a table-spoonful for adults, and a dessert or a tea-spoonful for children, according to age, three times daily; it may be administered at any hour, but it is preferable to select the time of meals, since we know that the pancreatic secretion manifests itself only during the stomachal digestion to act immediately on the alimentary principles as soon as they pass from the stomach into the intestine. Though the quantity of Iodine is very small in each dose, it acts, nevertheless, with a greater efficacy than a larger quantity of any of the Iodides, for the reason stated by Professor Bouchardat and others, that Iodine in Cod-Liver Oil is not eliminated from the system as the other soluble preparations of Iodine, but is successively deposited in the economy as the Oil is gradually decomposed in the blood.

When Iron is required with the Oil, Fougera's Dragées or Syrup of Pyrophosphate of Iron will be found the most agreeable and active adjuvant. It is best for children and delicate persons to take the Syrup of Iron immediately after the Oil.

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The substance of which these Dragées consist is a product of natural formation, obtained direct rom Cod Livers, by concentrating their watery constituents, which have been discovered to hold in solution large quantities of those active medicinal principles to which many of the most eminent authorities have attributed the remedial effects of Cod-Liver Oil.

It has been found by analysis that the oil contains but a small part of the medicinal elements existing in Cod-Liver, and that the greater portion is held in solution in the waters which have been hitherto thrown away. This solution has been reduced to an extract, which extract has been made into pills, which, by being *Sugar-coated*, have been converted into what the French call dragées.

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Professor Garreau's Analysis of Cod-Liver Extract, Compared with Analysis of Cod-Liver Oil by De Jongh.

	Cod-Liver Extr't.		Cod-Liver Oil.	
Oily Acids and Glycerine		none		95.967
Ichthyoglycine	50.000		none	
Propylamine	2 545		none	
Acetic, Lactic and Butyric Acids	6.000		120	
Extractive (undetermined) Gaduin, &c	10.620		318	
Non-oleaginous Organic Constituents		69.165		438
Phosphorus and Phosphoric Acid	2.090		113	
Sulphur and Sulphuric Acid	200		71	
Iodine	154		37	
Chlorine, with trace of Bromine	1.525		149	
Soda	1.170		55	
Magnesia	366		9	
Lime	510		152	
Potash	211		none	
Ammonia	2.862		none	
Inorganic Constituents		8.988		586
Water and Loss		21.747		3.009
		100.000		100.000

The extract is thus shown to contain 135 times as much of non-oleaginous organic substances as the oil, and 15 times as much of inorganic elements. Those two classes of bodies together form 78.153 per cent. of the extract, but only 1.024 of the oil. In a tablespoonful of the oil, which comprises 240 grains, there are therefore present hardly 2½ grains of the above matters, while the extract is almost wholly composed of them.

PRICES.—Box containing 60 Dragées, equal to 1½ pints of the best Cod-Liver Oil, 75c.; Box of 120 Dragées, equal to 3 pints of Oil, $1.25; Box of 240 Dragées, equal to 6 pints of oil, $2.00.

Samples furnished to Physicians without charge, on application to M. Ward, Close & Co., Wholesale Agents for the U. S. For sale by Caswell & Co., Fifth Avenue Hotel; J. Neergaard, 1183 Broadway; E. McIntyre, Broadway, cor. 18th Street; J. & I. Coddington, Broadway, cor. Washington Place; E. L. Milhau, 183 Broadway; Chas. Seidel, 64 Sixth Avenue; Wm. Somerville, 205 Bleecker Street; A. H. Bender, 1968 Third Avenue; E. Fougera & Co., 30 North William Street, N. Y.; Elliott, White & Co., Philadelphia; A. Vogeler & Co., Baltimore; Reed, Cutler & Co., Boston; W. F. Phillips & Co., Portland; F. E. Suire & Co., Cincinnati; Lord & Smith, Chicago; Richardson & Co., St. Louis; Jenks & Gordon, St. Paul. Send for a Circular.

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Whoever experiences that sense of weariness and exhaustion which renders all employment irksome, and incapacitates the mind for steady application to any subject, may take it for granted that biliousness, combined with foulness of the stomach, is at the bottom of the mischief. Under these circumstances,

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Physicians strongly recommend it in fever, as a means of cooling the surface by promoting perspiration, allaying thirst, and clearing the tongue and fauces from the viscid matter which generally coats them more or less in all febrile cases.

Taken in small doses every other day or so, it is the best known antidote to the fevers which prevail in summer, and when used in this way in the spring and fall, will be found an admirable safeguard against the bilious remittants and intermittents common during those seasons.

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